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SOCIALIZED MEDICINE A THREAT TO QUALITY OF MEDICAL SERVICE

Dr. Ernest E. Irons, Chicago, a member of the Board of Trustees of the American Medical Association, says that "governmental regimentation of medicine would give the American people an inferior rather than a better quality of medical service."

Writing on "Medicine and Economics" in a recent issue of *The Journal of the American Medical Association*, Dr. Irons states that such regimentation "would be another long step toward the destruction of free enterprise and of American democracy."

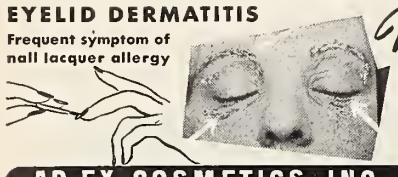
Dr. Irons, who is past president of the American College of Physicians, a war-time member of the committee on drugs and medical supplies of the National Research Council and past chairman of the American Board of Internal Medicine, points out how socialized medicine would affect the quality of medical service for the American people. Dr. Irons says in part:

That socialized medicine interferes with the physician-patient relationship is self evident by the recognition of advocates of socialized medicine of the necessity of providing a panel. The most shrewd advocates of socialized medicine have failed utterly in their contention that their plan will not interfere in this fundamental confidential relation of doctor to patient. It always has and always will. Indeed, this interference is part of their plan, although the more ardent advocates will not admit it . . .

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(Continued on Page 17)

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SOCIALIZED MEDICINE A THREAT TO QUALITY OF MEDICAL SERVICE

(Continued from Page 16)

the physician is alert, well trained, honest, proud of his profession and its achievements, he will strive continually to improve and give better service, and he is rewarded by the gratitude of his patients and in increase in his clientele and emoluments. To the degree that he is poorly prepared, slothful and loses his incentive to improve, he will do less creditable work. He will be limited by the deadly average of attainment, loss of initiative and dependence on a paternal government, which has always been the next step downward in socialistic governments of history. The removal of the individual incentive is fatal to progress, and human nature is the same, irrespective of occupation. Socialized medicine will reduce the quality of public service as it has in modern governments elsewhere.

Many social injustices and inequalities remain to be corrected. These become more evident as our general standard of living rises from decade to decade, but the remedying of these faults should not be made the occasion for destruction of past gains. In medicine, inadequacies in medical care are closely interlocked with general economic deficiencies. Understaffed and economically poor communities and areas require individualization of treatment, and a plan which will be efficient in one region may not work in another with a different local ideology and economy . . .

(Continued on Page 24)

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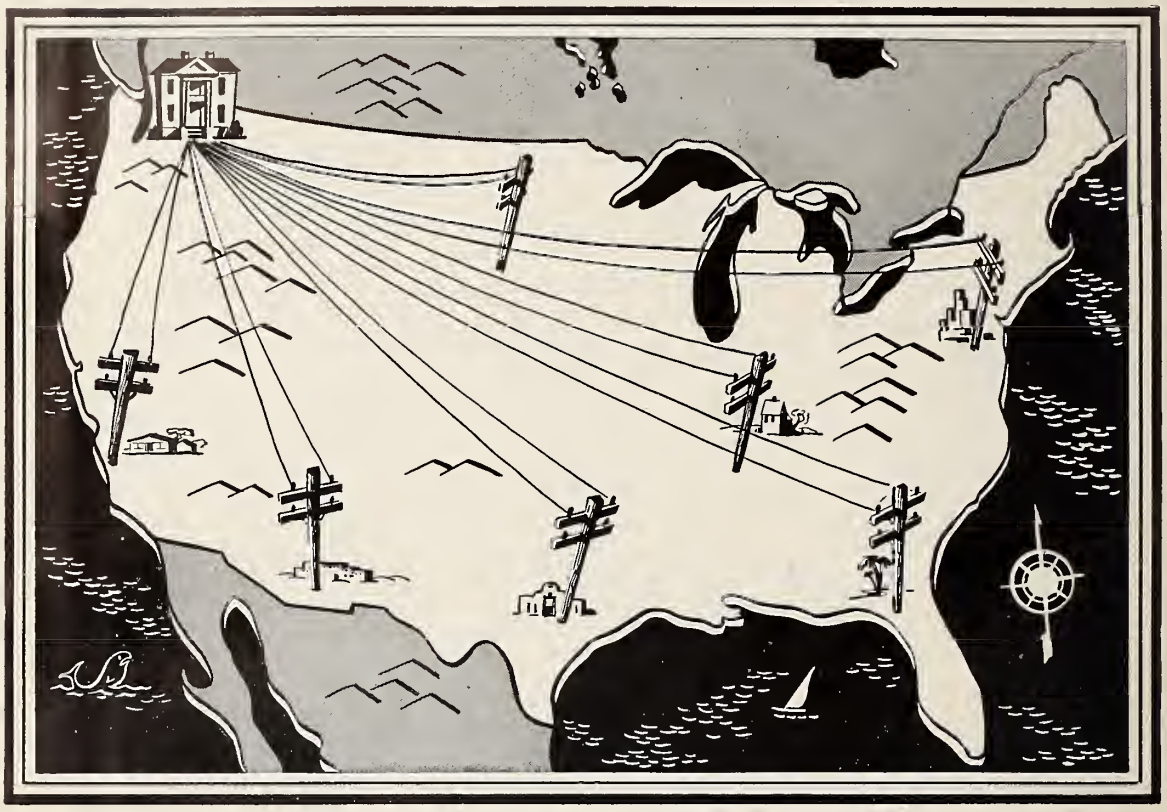
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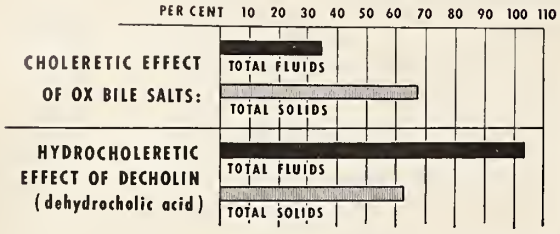
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BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA

By Frederick N. Scatena, M.D.,
Secretary-Treasurer

Board Proceedings

At the meeting of the Board of Medical Examiners held in Sacramento, October 20 to 23, 1947, Dr. Richard O. Bullis of Los Angeles was elected president; Dr. Anthony B. Diepenbrock of San Francisco was elected vice-president; and Dr. Frederick N. Scatena of Sacramento was reelected secretary-treasurer.

* * *

Governor Warren recently appointed Dr. Clayton Mote of San Francisco to the Board of Medical Examiners in the place of Dr. Herbert S. Chapman of Stockton, who resigned.

* * *

The following changes have recently been made in the status of licentiates of the Board:

Paul Adams Bulpitt, M.D.—Found guilty of a violation of Section 2383 and 2411 of the Business and Professions Code and his license was revoked. However, order of revocation was stayed for a period of five years and respondent was placed on probation with specified terms for that period. Upon full compliance with the terms of the probation and the expiration of the five-year period, respondent shall be restored to all privileges of his license free and clear of conditions of probation.

Sidney Roy Garfield, M.D.—Found guilty of a violation of Section 2392 of the Business and Professions Code and his license suspended for a period of one year. Order of suspension and the effectiveness thereof was suspended for a period of five years and respondent was placed on probation with specified terms for that period. Upon full compliance with the terms of probation and the expiration of the five-year period respondent shall be restored to all privileges of his license free and clear of the conditions of probation.

Harrison B. Jewell, M.D.—Found guilty of a violation of Section 2383 of the Business and Professions Code and his license was revoked.

John H. Jewell, M.D.—Found guilty of a violation of Section 2383 of the Business and Professions Code and his license was revoked.

John Andrew Kelleher, M.D.—Found guilty of a violation of Section 2411 of the Business and Professions Code and his license was revoked.

Scott S. McCune, M.D.—Found guilty of a violation of Section 2383 and 2390 of the Business and Professions Code and his license revoked. Order of revocation stayed for a period of three years and respondent placed on probation with specified terms for that period. Upon full compliance with the terms of probation and the expiration of the three-year period, respondent shall be restored to all privileges of his license free and clear of conditions of probation.

Wasily V. Muller, M.D.—Found guilty of a violation of Section 2383 of the Business and Professions Code and his license was revoked.

(Continued on Page 26)

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SOCIALIZED MEDICINE A THREAT TO QUALITY OF MEDICAL SERVICE

(Continued from Page 17)

We have already seen in our own national life the ill effects of great business monopolies: the Sherman Antitrust Act was passed to prevent the stifling of competition. Monopoly of labor through unions originally designed to obtain justice and fair treatment for labor has now resulted in profit to a few of one class, to the detriment of a still larger class of labor, by denying them free opportunity to work. Monopolies whether of capital or of labor work to the benefit of their sponsors only so long as they are exceptional—when they become general they are destructive of the general welfare and ultimately destroy their creators. For this reason socialists and communists favor monopolies in business and in medicine as factors forwarding their own objectives . . .

Care of people by a paternalistic government results in loss of their sense of personal responsibility, first to participate in government, and later to make any effort to contribute to the general welfare.

In urging the theory of the right of a citizen to be cared for, social workers, betrayed by their own idealism, forget that this citizen has also an obligation in a democracy himself to contribute to the general welfare. Without insistence on this obligation, democracy fails.

(Continued on Page 26)

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SOCIALIZED MEDICINE A THREAT TO QUALITY OF MEDICAL SERVICE

(Continued from Page 24)

We are just now emerging from a period of governmental regulation and centralization under bureaucracies made necessary by total war. This period, in which we have become somewhat inured to regimentation, is especially dangerous to our democracy. Socialist and totalitarian governments grow by steps, slowly at first, but with a steadily increasing tempo and always by deluding the people into the belief that the new will be better than what they already have. Government monopoly whether in business or in medicine inevitably leads to the abuse of power and deterioration of quality of service.

BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA

(Continued from Page 20)

Board Proceedings

The Board of Medical Examiners conducted oral examinations at the Board Office in Los Angeles on November 8, 1947. Due to the large number of applicants, it was necessary that commissioners on examination be appointed to serve with the Board members. One hundred and thirty applicants were examined. On November 9th an oral and clinical examination for graduates of foreign medical schools was given at the Los Angeles General Hospital. Fourteen applicants appeared and were examined.

(Continued on Page 30)

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BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA

(Continued from Page 26)

Following are the dates set by the Board for meetings and examinations for the year 1948:

Meetings and Written Examinations:

Los Angeles, March 1 to 4, inclusive.
San Francisco, June 7 to 10, inclusive.
Los Angeles, August 9 to 12, inclusive.
Sacramento, October 18 to 21, inclusive.

Oral Examinations:

San Francisco, January 17 and 18.
Los Angeles, February 28 and 29.
San Francisco, June 5 and 6.
Los Angeles, August 7 and 8.
Los Angeles, November 20 and 21.

Oral and Clinical Examinations for Foreign Medical School Graduates:

Los Angeles, February 29.
San Francisco, June 6.

* * *

During the month of December renewal notices were sent to all licentiates of the Board, advising them that the $2.00 annual tax fee was due and payable. The Code provides that the annual tax fee is due January 1st of each year and delinquent sixty days thereafter. It is, therefore, important that all licentiates pay the renewal fee before March 1, 1948, in order to maintain their license in good standing.

(Continued in Back Advertising Section, Page 34)

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California MEDICINE

OFFICIAL JOURNAL OF THE CALIFORNIA MEDICAL ASSOCIATION
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VOL. 68 JANUARY, 1948 NO. 1

The Bleeding Nipple As a Diagnostic and Therapeutic Problem

IAN MACDONALD, M.D., *Los Angeles*

THE management of the woman whose complaint is that of bleeding from the nipple remains a controversial issue. Only a small fraction of women with pathological changes in the breast have any sort of external exudate from the intact nipple, and it is therefore an infrequently occurring problem in the life of the average clinician. Its significance is variously interpreted by those who have studied the problem, to the extent that some authors recommend almost routine simple mastectomy on the basis of this single symptom, while others adopt a more conservative attitude with emphasis on accurate diagnosis. Many surgeons have an erroneous impression of the ominous import of bleeding from the nipple as a presenting symptom, and employ unnecessary radical surgical measures in conformance with their irrational diagnostic approach.

The problem will be reviewed here on the basis of its statistical importance in relation to pathological changes in the breast, benign and malignant. The conclusions are drawn from the few large series of cases reported, notably by Adair, Bloodgood, Gray and Wood. Geschickter, and Campbell, supplemented by ten cases from the author's recent experience. Only bleeding from the intact nipple is considered, excluding such conditions as produce erosive or ulcerating processes in the areola itself, notably so-called Paget's disease.

That bleeding from the nipple in breast lesions is an infrequent symptom is shown by Table 1, taken from Geschickter, with an incidence of 4 per cent in cancer of the breast compared to over 6 per cent in benign lesions. This is evidence of an arresting nature, on a sound statistical base of 5,300 patients, that sanguineous exudate from the nipple is frequently indication of a benign process.

TABLE 1.—*Bleeding in Breast Lesions*

Lesion	No.	Bleeding	P.C.
Cancer	2460	102	4%
Benign	2917	185	6.3%

Essentially, all instances of bleeding or other discharge from the nipple have their origin in papillary, hyperplastic lesions of the ductal epithelium of the breast, less commonly in the acinar elements. Thus the most common site of origin is in the central rather than the peripheral portion of the breast, in the central third of the breast and especially in the subareolar area, rather than the peripheral two-thirds. In Table 2 is shown the incidence of bleeding from papillary lesions and it should be noted that only 4 per cent of the benign acinar (peripheral) lesions had bled from the nipple, while 48 per cent of the benign ductal (central) lesions presented this symptom. In contrast, only 10 per cent of all papillary forms of cancer bled externally. Campbell re-

TABLE 2.—*Bleeding in Papillary Lesions*

Lesion	No.	Age	Bleeding
Benign:			
Acinar	212	30-45	4%
Ductal	203	30-45	48%
Cancer	197	45-70	10%

Assistant Clinical Professor of Surgery, School of Medicine, University of Southern California.

Read as a part of the panel discussion of breast tumors before the sections on Anesthesiology, Radiology, General Practice, Pathology, and General Surgery at the 76th Annual Session of the California Medical Association in Los Angeles, April 30-May 3, 1947.

ported a smaller series in which 8 of 233 cases of benign hyperplasia had bled, while 18 of 543 malignant neoplasms had so behaved.

The major concern of the clinician is less academic and can be stated by this question: What is the incidence of breast cancer in women who have nipple bleeding? The available evidence is seen in Table 3, in which 183 collected cases had a proven incidence of cancer in 80 patients or 43 per cent, while in the remainder of 57 per cent there were morphologic changes of benign papillary, usually ductal, hyperplasia. Thus on the basis of statistical chance, the possibilities of cancer and benign papillary lesions are almost equal.

TABLE 3.—*Discharge from Nipple*
(Serous or Sanguineous)

Total		183 (Collected)
Cancer	80	43%
Benign	103	57%

The factor of age distinctly modifies this over-all chance, and is an important consideration generally ignored by previous observers. By reference to Table 2 one observes that the benign papillary lesions with bleeding in Geschickters series occurred from ages 30 to 45, while the papillary carcinomas were in women from 45 to 70. The average age in Adair's series was 42 years for non-malignant lesions, 54.5 years for malignant neoplasms. In Bloodgood's series of bleeding without palpable tumor, those women who proved to have carcinoma had an average age of 52 years. From this and other data, it seems apparent that the predictable chance of cancer increases almost in geometric ratio with the advancing age of the patient after the climacteric. The premenopausal patient is most likely to have some papillary variant of the abnormal hyperplasia-involution changes in the breast which we call cystic disease, as the cause of her bleeding. The climacteric marks the end of a physiological era after which papillary ductal changes in the breast become increasingly prone to malignant mutations, a fact which the clinician should recognize.

CONDITIONS PRODUCING THE SYMPTOM

The common pathological states producing this symptom include ductal papillomata, local or diffuse, acinar hyperplastic change with cystic degeneration and papillary dysplasia, and ductal carcinoma, intraductal or infiltrating. Unusual causes of bleeding are trauma, sarcoma, vicarious menstruation, fibroadenoma, and inflammatory states including tuberculosis. To these can be added a recent case encountered by the writer in which a number of varices in the breast drained from the nipple through a dilated vein which presented itself as an apparent subareolar cyst.

Excluding the museum pieces, then, the problem of differential diagnosis of bleeding from the nipple is to distinguish between ductal carcinoma and benign ductal papillomatous changes. The ductal epithelium may exhibit a wide variety of cellular changes, from simple hyperplasia in a single ductal segment, through diffuse papillary hyperplasia involving many ducts, to actual benign neoplasia in the form of distinct papillomas. These papillary excrescences within the ducts are extraordinarily fragile, and with senescence and desquamative shedding of the surface layers of epithelium, erosion and bleeding into the duct occurs. Such papilliferous projections frequently produce an obstructive mechanism within a duct, with back pressure, dilation of the ductal system peripherally and intermittent escape of serous and serosanguineous exudate from the nipple. In some instances the dilated duct rather than the obstructing papillary lesion may be clinically palpable.

The ductal papillary carcinomas may arise either from pre-existing abnormal states of hyperplasia or benign neoplasia or may be found without demonstrable evidence of adjacent dysplasia. In rare instances bleeding from papillary ductal carcinoma will occur in the pre-infiltrative or intra-ductal phase of the neoplasm, offering an occasional opportunity for definitive curative treatment of an entirely local cancer.

If one accepts the evidence that the number of malignant and benign lesions in these patients will be approximately equal, the policy of routine mastectomy advocated by Gray and Wood and others is unreasonably drastic. At the same time, the surgeon must exhaust every possible measure to achieve accurate diagnosis, so that he may avoid radical measures when none are required but not at the cost of overlooking an occult carcinoma.

LOCALIZATION OF SOURCE OF BLEEDING

Diagnosis of the cause of bleeding from the nipple is the joint responsibility of surgeon and pathologist, for it is accomplished by surgical exploration and by histopathological study. A necessary preliminary phase is the accurate localization of the source of bleeding in the ductal system of the breast. Localization of the bleeding source may require meticulous and repeated examination, the details of which merit some emphasis.

The first and obvious step is the search for a palpable, space-occupying tumor in the breast, and in slightly less than half of patients one's search will be promptly rewarded by the finding of a tumor, usually in the central third of the breast.

Lacking a palpable mass, the examination is directed toward the localization of the duct or ducts from which the bleeding originates. In some instances the patient herself may have discovered a pressure point. If there has been recent bleeding, inspection of the nipple with low power magnification may reveal a terminal duct opening containing dried blood. The most important single part of the examination is radial stroking of the breast with a finger tip, from the periphery toward the areola, repeating the process in clockwise fashion over 12 or more circumferential segments. This procedure should be done with

the patient in both sitting and supine positions. If a pressure point is located, it should be marked on the skin, with the patient supine, and accurately located on a diagram on the patient's record. The location of the ductal orifice on the nipple through which the blood exudes should be similarly noted. It is advisable to reexamine the patient in several days to verify the apparent source of bleeding.

In approximately three-fourths of patients without a palpable tumor, a source of bleeding can be found. In about half of these, there will be diffuse, beady nodularity at the apparent source to indicate the presence of ductal disease. This leaves some 10 per cent or 15 per cent in which no tumor is present and no localized source of bleeding can be found.

Certain accessory diagnostic measures may be valuable. The ductal exudate may be smeared and stained by Papanicolaou technique, although the results are meaningless unless cancer cells are found. Transillumination may reveal a duct containing blood but its differentiation from a vein can offer difficulty, and transillumination generally has not been of great value in the writer's experience. The use of radiopaque material injected into the ducts for x-ray mammography has hazards which have discouraged its use, but soft tissue radiographs of the pendant breast occasionally demonstrate an area of radiopacity which may be a lead to localization. Intra-ductal biopsy as recently advocated by Leborgne would seem to have a limited use.

FINDINGS INDICATE GROUPINGS OF CASES

The physical findings offer clear indications for the management of these patients, and suggest a natural division of cases into three groups:

I. In those patients in whom a palpable tumor is found, the management is that of any similar breast tumor, excision of the mass with subsequent treatment based on histological examination. This implies radical mastectomy even for non-infiltrating carcinoma.

II. No palpable tumor is located, but the source of bleeding is accurately determined. Such cases offer a challenge to the surgeon in the performance of meticulous, exact excision of the duct or group of ducts involved.

A preliminary maneuver of considerable value is the lubricated introduction of a medium sized straight skin needle, blunt end first, through the orifice of the main duct previously located as the exodus of the bleeding. Usually, by gentle manipulation, the duct can be canalized for several centimeters. A semi-circular, circumareolar incision is then made with the needle in the center of the incisional arc, and a skin flap reflected peripherally to expose a remarkably large area of the underlying breast. The periareolar incision is the approach of choice for ductal exploration or any lesion in the central third of the breast. It has the additional advantages of having little tendency to the keloidal thickening so common in radial incisions, and of a vastly superior cosmetic end result. Excision of the needled duct with an adequate margin of adjacent breast parenchyma is then accomplished, carrying the dissection peripherally to resect the immediate tributary ductal elements, or adjacent dilated or nodular ducts if present. The problem then becomes the pathologist's burden. On gross examination he will usually locate the papilliferous lesion or lesions, and the histology of the process determines whether this limited surgery is adequate. If a papillary process is not located in this excised area, it is best to perform a quadratic resection, the mid-portion of the quadrant representing the area from which the bleeding was found to originate. The resection should be carried to the extreme periphery of the breast, and the excised segment deserves careful serial sectioning by the pathologist.

III. Those patients in whom no palpable tumor is found and no source of bleeding located offer the most perplexing problem in treatment. Bloodgood advocated a laissez faire attitude toward these patients, and the fate of 68 of his cases is illustrated in Table 4. Only 9 per cent of those followed for three or more years proved to have carcinoma, and it is of interest that an average period of thirty-four months elapsed before it was possible clinically to demonstrate fully developed cancer. It is proper to assume that most of these women developed actual carcinoma after the onset of ductal bleeding. Of greater importance is the more advanced age of those patients who did develop cancer, an average age of 52 years compared to those women of 30 to 45 years with benign lesions. For this reason it seems proper to divide this non-localizable fraction into two age-determined physiological groups. The premenopausal patient may be safely advised to return for monthly reexamination, with the expectation that in most instances localization of the involved duct will be possible, or that the exudate will cease spontaneously. The post-menopausal woman, by contrast, is in a situation where the increased hazard of an occult ductal carcinoma is sufficiently distinct to justify routine simple mastectomy. The completion of the radical procedure should be added when the pathologist reports the presence of carcinoma.

Table 4.—*Bleeding Nipple Without Palpable Tumor* (Bloodgood)

Total	68
Follow-up (3 or 7 yrs.)	57
Subsequent Cancer	5
Incidence	9%
Latent Period Av.	34 mo.
Average Age	52 yr.

This therapeutic outline conforms to the essential requisite of individualization based on a set of variable factors.

SUMMARY

1. Bleeding from the nipple occurs almost invariably from papillary ductal lesions, central in location.

2. Benign lesions and malignant neoplasms are found to be its source in almost equal numbers.

3. The incidence of carcinoma increases almost

in direct ratio with advancing age following the climacteric.

4. Both diagnosis and treatment are accomplished by surgical methods, but should be preceded by accurate localization of the lesion.

5. Intelligent treatment requires individualization, employing conservative measures in the presence of proved benign lesions, radical measures where cancer is demonstrated or suspected.

QUESTIONS AND ANSWERS

DR. IAN MACDONALD: The first question: "Discuss the relation of the original skin incision and the possibility of subsequent skin recurrences."

I think the first part of the answer should deal with the nature of neoplasm itself, because regardless of how radical one's incisions are, skin recurrences are most common in highly malignant tumors. Otherwise, the radicalness of the surgical approach exactly determines the chance of skin recurrences: and consequently I think one has to adopt the attitude that the incisional approach is made without any possible thought as to the closure of the wound when you complete the operation. A rough guide is that you can take a standard sized scalpel, complete with blade, and lay the center of the scalpel over the lesion of the breast, and this indicates the amount of skin that should be removed in every direction peripheral to the tumor. After that, no matter what kind of incision you make, you will have removed an adequate amount of skin. The closure may be difficult; it may require the formation of skin flaps to approximate the edges. I think the number of cases in which grafting is necessary is very small as you learn how to mobilize flaps from the chest wall.

REFERENCES

Adair, F. E.: Sanguineous discharge from the nipple and its significance in relation to cancer of the breast, Ann. Surg., 91:197 (Feb.), 1930.

Campbell, O. J.: Bleeding nipple, Surg., 19:40 (Jan.), 1946.

Geschickter, C. F.: Diseases of the breast, Lippincott, 1943.

Gray, H. K., and Wood, G. A.: Significance of mammary discharge in cases of papilloma of breast, Arch. Surg., 42:203 (Feb.), 1941.

Hickens, N. F. et al.: Discharges from the nipple and mammography, Arch. Surg., 35:1079 (Dec.), 1937.

Leborgne, R.: Intraductal biopsy of the breast, Arch. Surg., 19:47 (Jan.), 1946.

PAINFUL BREAST

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"THE number of senses, and just what constitutes a separate sense, are by no means fixed . . ." says T. C. Ruch in Howell's Physiology. This observation is most pertinent to any basic consideration of the painful breast; it delineates present understanding and indicates the extent of interpretation. Physiologically the mechanism of pain production in mastodynia is not yet understood. Nor does a study of the anatomy or of the pathology of the breast give us any clearer insight into a manifestation which in other situations is often a symptom of major significance. Pain in the breast which is probably the most outstanding source of worry to those afflicted is a symptom, evaluation of which must rely upon clinical observation of the patient. The psychological trauma of pain in the breast is out of all proportion to its actual importance as a diagnostic sign because in the lay mind it is apt to be associated with the thought of malignancy. This situation is rendered more difficult by the impossibility of distinguishing accurately between the discomfort of the normal cyclic phenomena and that of disease.

An enumeration of breast conditions in which pain occurs includes first, inflammatory lesions such as those of extramammary origin—tuberculosis of a rib or a vertebra, intrapleural lesions and particularly herpes zoster prior to development of typical skin lesions. The intramammary inflammatory lesions are commonly accompanied by pain, although in actinomycosis it may be absent. Secondly, new growths may provoke pain: At one extreme, there is the almost physiological increase of acini accompanying the periodic hormone influence of menstruation, and at the other, malignant neoplasm. Between these fall most cases of neoplastic disease. Pain is not a symptom of differential significance because it accompanies some phase of almost all abnormal conditions of the breast. With minimum physical findings, the presence of pain is evidence against rather than for malignancy. It is difficult to understand this observation when histological examination not infrequently shows dissemination of the carcinoma along nerve sheaths. It must not be forgotten that an early painless breast lesion may produce persistently painful extramammary metastases. More than 20 years of trying to interpret the cause and significance of mammary pain has left me hoping that each new advance in our knowledge of the menstrual cycle would furnish the answer.

Two years ago within four hours I asked two men of national reputation the same question: "Is chronic cystic mastitis a premalignant lesion?" Our lack of knowledge is demonstrated by their answers: "Not infrequently," and "Never." Certainly such a wide divergence of opinion does not result from difference in experience; it must come from two different points of view of the same material. This is borne out by the natures of their major interests: one was a surgeon, the other a pathologist. One was solving a clinical problem, the other trying to correlate a pathological picture with all related fields. As disturbing as the answers may seem, both were right. The term "chronic cystic mastitis" (so-called "fine granular breast") covers a variety of pathological pictures and a clinical picture that often belies the term "fine granular." Certainly from patient to patient, from breast to breast, from quadrant to quadrant, and even from lobule to lobule the only constancy of it is its variability. As diversified as are the gross findings, just as variable are the accompanying discomforts or pain. The whole spectrum of pain is here represented as to intensity, duration, and periodicity. We speak commonly of the pain as being premenstrual, but its frequent occurrence at other times is almost as outstanding.

Nathanson[3] has recently reviewed the field of benign breast disease in an effort to correlate the physiologic and pathologic features of such conditions. He points to the paucity of cytological observations of normal material at different phases of the menstrual cycle as a factor retarding advance of knowledge and states: "The breast is prepared each month for pregnancy, since it is subject to the same influence as the uterus. Like the uterus it has both a proliferative phase induced by estrogens and a secretory phase effected by progestin and the anterior lobe of the pituitary gland. A process analogous to menstruation then occurs and is represented by an involutional change and absorption of the secretion if pregnancy does not ensue." To this basic concept he adds that secondary nervous influence, reflexly from the breast itself by way of the hypophysis, and indirectly from disease in the pelvis by way of the sympathetics, may be significant. After reasonably accounting for spontaneous and induced hypertrophy of the breast, on this working hypophysis he considers the matter of fibroadenoma of the breast and chronic cystic mastitis.

Here must be added the disconcerting factor of the variable response of breast tissue to all sorts of stimuli. Geschickter,[1] working with the same problem, is almost dogmatic as to the clinical and experimental support of his causative theory of mammary dysplasia. Beginning with the mastodynia of adolescence, he traces the changes through the adenosis of the reproductive woman to the cystic dis-

Read as a part of the panel discussion of breast tumors before the sections on Anesthesiology, Radiology, General Practice, Pathology, and General Surgery at the 76th Annual Session of the California Medical Association in Los Angeles, April 30-May 3, 1947.

ease of the menopause. It is his view that when the normal balance between estrogen and corpusluteum values is upset by hyperestrinism or decreased corpusluteum function, dysplasia results. To quote him directly: "In the last analyses, all forms of mammary dysplasia are the result of hyperestrinism of varying degrees, either relative or absolute."

Again, the isolated response in fibro-adenoma demands an additional postulate, namely, varying breast sensitivity. So far one can only conclude with Hoffman[2] that in addition to hormonal, nervous, and possibly other stimuli there are "genetically controlled conditions within the receptor organ."

The cause of painful breast in malignant disease is difficult to determine. The part played by estrogen has been assigned both major and minor roles. This situation is for the moment confused by the improvement in certain cases with metastases by administration of large doses of estrogen.

With this background we may look briefly at the problem of the painful breast. In the case of the inflammations we may adopt an expression of the older doctors: "Wait an interval and it will declare itself," the presumption being that the "interval" will be a reasonable one if the diagnosis is not evident at first examination. In case of the dysplasias the diagnosis of certain fairly well recognized conditions may be approached with comfort clinically, but not with assurance pathologically. The finely, uniformly granular breast of adolescence with recurrent premenstrual discomfort may improve with age or following pregnancy. It may develop into the more coarsely granular breast of "adenosis" or "adenofibrosis" characterized by increasing nodularity, venous engorgement, and density. The full-blown picture of this condition is known as the saucer or disk breast. Concomitant with the development of pathological changes is an increase in the duration and intensity of the pain. The menstrual periods come at shorter intervals and the flow is scant and of shorter duration. The incidence of sterility is high and there is often associated disease in the pelvis. These conditions seem to be variants in time of the same underlying hormonal disturbance. Practically all the available hormone substances in a large variety of dosage and combinations have been used in the treatment of them with no uniform results. This group of tumors rarely requires surgery.

An allied painful condition accompanying serous discharge from the nipple will be taken up elsewhere in this symposium.

The remaining painful conditions frequently require operation either for purpose of diagnosis or treatment. There is a reasonably general agreement that fibro-adenomata should be removed. These tumors occur early in adult life and tend to increase in size particularly during pregnancy, and they have been reported as the basis for malignant change. If they recur or are multiple, the approach should not be altered. The myxomatous variant of them occurring about the menopause requires more radical removal than simple excision.

Cysts, solitary or multiple may be aspirated, and if a cloudy milk-like fluid is obtained, this is substantial reason for watching that particular cyst. These lesions not uncommonly disappear spontaneously. Contrariwise, removal is frequently followed by the development of new cysts. The latter may be treated expectantly. It is not to be inferred that these conditions occur in pure form. Although they may do so, much more commonly they are found in varying combinations with other breast lesions.

There will remain, after consideration of the foregoing, a number of breast conditions that can be safely diagnosed and treated by pathological examination. There should be no hesitancy in making a biopsy in such cases.

"Time is of the Essence" and if we are to see these lesions early we must develop an educational program for the laity. Every woman must have impressed upon her that pain is a late symptom of malignancy; that she should come to know her own breasts by periodic self-examination, noting particularly changes in density during the different stages of her menstrual life. Only thus will the early non-painful nodule be discovered.

SUMMARY

1. Pain occurs in almost all types of disease of the breast and is not correlated with extent or type of lesion.

2. A review of theories of the causes of mammary dysplasis is present.

3. Many breast lesions can be accurately evaluated only by pathological analysis. When necessary, biopsies should be made.

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REFERENCES

1. Geschickter, Charles F.: Diseases of the breast, Lippincott, 1943.

2. Hoffmann, J.: Female endocrinology, W. B. Saunders, 1944.

3. Nathanson, T. J.: Present concepts of benign breast disease, New Eng. J. Med., 235:516 (Oct. 3), 1946, and 235:548 (Oct. 10), 1946.

The Diagnosis of Early Breast Cancer

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THE successful diagnosis of early, curable mammary carcinoma is governed by a multitude of complex factors which involve much more than symptoms and the refinements of physical examination. This paper is an attempt to touch briefly on the many other important related factors which are being developed, such as special technical examinations, information concerning the importance of heredity, and the relation of specific benign breast lesions to malignant lesions. Mention should be made also of the frequently unappreciated subject of patient psychology.

In the majority of cases, diagnosis of early cancer of the breast is not possible because the patient inadvertently neglects to afford the physician the opportunity. Numerous observers[2,3,9] report an incidence of axillary metastases at the time of operation in from 65 to 72 per cent of their patients. Immediately the question arises as to why such a preponderance of patients with easily palpable carcinomas in such an accessible organ as the breast came to operation with metastatic disease. The paradox led the author to investigate several of the causes.

Careful interrogation as to the first manifestation of mammary cancer revealed the startling information that over 75 per cent of the patients first noted their breast tumor by *accident*, usually while dressing or bathing. Further questioning revealed that women rarely examine or palpate their breasts routinely. Obviously, then, inasmuch as the early breast lesion is painless, metastases to the axillary nodes can occur long before the cancer is large enough to be detected by accident. It is equally obvious that the tumor must of necessity attain rather large dimensions before the unsuspecting patient will inadvertently note its presence. In this respect, it is significant and tragic that the average size of the tumor exceeds 2 cm. in diameter in 91 per cent of patients.

The second tragic aspect of the situation is the long interval of delay between the discovery of the tumor and the first visit to a physician. The average duration of symptoms before medical examination was *15 months* in a series of 1,000 cases of mammary cancer studied by Wevill,[11] while Nathanson[7] found the average duration of symptoms to be 12 months. Generally, the greater proportion of patients delayed medical consultation for six months or longer. The relation of long delay to poor prognosis is evident when the percentage of five-year survivals is calculated for each pathologic type of cancer. Further, it is possible to correlate both the size of the tumor and the duration of symptoms with the percentage of five-year survivals, and thereby impressively emphasize the consequences of neglect of self-examination and procrastination in seeking medical advice, which operate jointly to deny the physician an opportunity of early diagnosis. Geschickter,[3] for example, has noted that the size of the cancer and the number of patients who failed to survive the five-year period, increased in proportion to the duration of symptoms. In his series of infiltrating adenocarcinomas, a study of the most favorable group of patients with a five-year survival rate of 73.5 per cent showed the average tumor size was 1 to 1.5 cm. in diameter and the average duration of symptoms was three months. In the most unfavorable group with a low (9.3 per cent) five-year survival rate, the average size of the tumor was 7.8 cm. and the average duration of symptoms was 14 months.

SHOULD STRESS SELF-EXAMINATION

Unfortunately, future technical advances in early diagnosis of mammary cancer will not materially affect the high mortality rate of this group of women whose advanced disease is directly attributable to their ignorance of self-examination and their long procrastination in seeking medical advice. It is essential, therefore, for every physician to examine routinely the breasts of all female patients over the age of 30, regardless of their chief complaint, and to instruct them in the technique of self-examination. It would also be advisable to stress self-examination of the breasts in all cancer education programs. Unquestionably, the prime motivating factor which induces many women to postpone medical consultation after the onset of symptoms, is *fear*. This fear of cancer, which is widely prevalent, often impairs the reason and better judgment of the patient and leads her into a state of self-delusion in which she can comfortably evade the truth temporarily. Therefore, cancer education programs should emphasize the hope and promise inherent in the relatively high survival rates not only in the favorable types of carcinoma, but in the less favorable types, if they are diagnosed early.

If the foregoing observations are accepted as major causative factors, which partially explain the high incidence of advanced breast cancer, it is proper to assume that popular education is the answer to the problem, if it is intelligently coordinated by all physicians and such organizations as the American Cancer Society. There is evidence in the medical literature that cancer programs are operating to increase the number of women who are presenting themselves for treatment with early cancer of the breast. In the past few years, the corrected cancer mortality figures for California indicate that the death rate for all

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types of cancer in women has started to decline, while the rate for men continues to increase. The predominantly female attendance at all cancer forums and women's ready acceptance of cancer literature may be a partial explanation.

The medical history of the patient is extremely important whether she presents herself with a specific breast complaint or not. A family history, for example, of breast carcinoma should alert the examining physician, and with good reason. MacDonald [6] in a review of 2,636 cases of mammary cancer found that the relatives of these patients developed breast cancer three times more frequently than the control population. Wood,[12] in one of the few medical documents which might tenuously relate the Bittner milk factor to a similar factor in human mammary cancer, traced a family through four generations and found several female members who developed bilateral cancer of the breast. Breast cancer occurred only in those female members who had been nursed by their mothers. However, it cannot be too strongly emphasized that there is no evidence as yet of a similar, virus-like factor present in human milk. Nevertheless, it may be prudent to caution against the nursing of a female child by a mother who has had one breast amputated for carcinoma, and who has a definite family history of mammary carcinoma.

The history of slow, progressive growth in a breast tumor is ominous and should indicate the course of action to the physician. Sudden disappearance, or rapid subsidence, of a mass is suggestive of a cyst with rupture. Rapid onset and growth associated with tenderness and increased local skin temperature usually signifies an infection, but may be a lethal "inflammatory" carcinoma. As a rule, early breast carcinoma is painless and symptomless. This insidious characteristic leads many patients to minimize their breast tumors, because popular conception invariably associates cancer with pain.

NIPPLE BLEEDING

Nipple bleeding or discharge is more often associated with such benign lesions as adenosis and intracystic papillomas. The incidence of breast cancer associated with nipple bleeding, but *without a palpable tumor*, ranges about 4 per cent, according to several publications. These low percentage figures are deceiving to a dangerous degree because they do not emphasize the other ominous aspect of nipple bleeding associated *with a palpable mass*, and which is associated with a high incidence of cancer. Proper evaluation of nipple bleeding in a breast without a palpable tumor necessitates all the refinements of examination such as transillumination, localization of affected ducts by means of probes and digital massage, and microscopic examination of the discharge for red blood cells. Biopsy and the treatment of such cases may be better accomplished if the surgeon is aware of the multiplicity of intracystic papillomas (15 to 20 per cent) in the same breast, and the potential malignancy of both intracystic papillomas and adenosis.

The principles of physical examination of the breast which aid in the diagnosis of early lesions are limited. Very often, the examining physician can do little more than detect, or confirm, the presence of the tumor. In the final analysis, only the pathologist can accurately state if the lesion is or is not cancer.

If cancer of the breast, and such etiologically associated benign lesions as chronic mastitis, are properly appreciated as processes which are not static, the physician who foregoes biopsy for observation should then endeavor at least to obtain a "motion" picture of the process with three-month to six-month reexaminations. If the original lesion has been carefully measured, described and plotted in an anatomical diagram of the breast, slight but significant changes may be detected as early warnings. These precautions may enable one to diagnose an early carcinoma which was not palpable in the initial examination, or to detect the development of carcinoma in an area of adenosis or mastitis.

In the latter respect, the recent medical literature offers some evidence that breast cancer is more common in women with a history of benign mammary lesions. Warren [10] states that there is 4.5 times as much carcinoma in the group with chronic mastitis and chronic cystic mastitis as in the normal population. The incidence was 11.7 times higher when this general group was restricted to age groups betweeen 30 and 49 years.

PHYSICAL EXAMINATION OF THE BREASTS

The development of refinements in the actual physical examination of the breasts has been more or less static for the past decade. Generally, too much emphasis has been placed on the signs of obvious, advanced breast cancer, and too little stress has been made on the minimal signs of early, curable cancer.

Physical examination is best performed with the patient both in the sitting and the reclining positions. During inspection in the sitting position, the breasts are carefully compared for contour and symmetry. Not infrequently, the infiltrating type of carcinoma may be detected beneath an area of minimal depression in the subcutaneous tissues. Extension of the arms over the head in this position may serve to accentuate any skin attachment present. Slight fullness may indicate an underlying benign lesion, or a circumscribed type of carcinoma. Comparison of the horizontal level of the nipples often may reveal a slight cephalad elevation of one nipple which can precede actual nipple retraction by several months. A localized dilatation of superficial veins or a minimal degree of infraclavicular edema may be significant. However, these are usually late signs. Nipple retraction and "pig-skin" appearance of the skin also are late developments, and in a small percentage of cases can be duplicated closely by suppurative mastitis.

Palpation of the breasts should also be performed with the patient in the sitting and reclining positions if the tumor size, shape, mobility, and consistency are to be accurately appraised. Tumors which are easily palpable in one body position may be difficult

to locate when the patient assumes the alternate position. The consistency of the mass is more efficiently studied in the sitting position where it can be examined bimanually. Breast cysts particularly lend themselves to this type of examination. Early skin attachment may be elicited by lifting or displacing the skin overlying the mass. Palpation should also include gentle digital massage over all quadrants close to the areola in order to localize and empty any ducts distended with blood or discharge. Often it is advisable to indelibly mark the skin over the exact meridian of such distended ducts, in the event a lacrymal probe or needle cannot be passed through the nipple orifice into the duct during surgery.

TRANSILLUMINATION AN AID IN DIAGNOSIS

Transillumination of the breast substance with cold light is a useful aid in diagnosis. The most effective light, is a small, single focus beam which is rheostat controlled, and is directed up from beneath the breast. Ducts which are distended with blood can be localized for operation, and translucent cysts may be differentiated from solid tumors.

Needle aspiration is also a useful aid but may prove a misleading procedure unless its limitations are appreciated. Aspiration of clear fluid from a breast tumor merely confirms the presence of a cyst. Contrary to accepted opinion, intracystic papillomas and intracystic carcinomas often contain clear fluid and not bloody fluid. Aspiration biopsy in the hands of an expert is an accurate procedure, if the biopsy is interpreted by a pathologist familiar with the method. Pathological interpretation is simplified if the clot of tissue is placed intact on a square of ordinary blotter paper, dropped in formalin, and handled as a paraffin block. Smearing the needle clot between glass slides invariably distorts the tissue architecture. A negative aspiration biopsy is meaningless inasmuch as the variables in technique are many. Added to these variables is the chance that the small needle section may not include a small focus of carcinoma buried in a mass of mastitis. However, the author has found the technique valuable in two recent patients. Both were young women who suddenly developed a breast tumor associated with tenderness, nipple retraction and "pig-skin" edema. Aspiration biopsy yielded purulent material, and both lesions quickly responded to sulfadiazine therapy.

In the final analysis, wide surgical excision and biopsy of the mass *in toto* is the one method which eliminates most of the unfavorable variables inherent in the procedures above. Safe and wide surgical excision is facilitated if an elliptical skin incision is made and used for traction, rather than a linear incision down to, or into, the mass. "Wedge" biopsy or segmental biopsy is mentioned merely to point out the hazard of entirely missing an area of carcinoma in a mass of adenosis or mastitis. Excision of the mass in its entirety conforms with the observation of Warren[10] that "it is not uncommon to find carcinoma in breast tissue which had not been palpated by the surgeon entirely aside from the cyst which led to the operation."

With these thoughts in mind then, it is difficult to subscribe to the "wait and see" school of thought. At this point it is relevant to enter a plea for early biopsy in three special categories of patients. In the first group are patients with a mass in the inner (medial) hemisphere of the breast. Bartlett,[1] in his great contribution to the subject, has shown that breast cancer medial to the nipple line metastasizes rather early through the perforating internal mammary vessels into the mediastinum. His five-year survival for lesions limited to the inner hemispheres was 47 per cent, as compared to 77 per cent for lesions in the outer quadrants of the breast. It is equally important to examine carefully the breasts of pregnant and lactating women every month, and to biopsy any suspicious mass without delay. Such action may constitute the only hope for this group of women whose five-year survival rate ranges from zero in MacCarty's series[8] to 19 per cent in Geschickter's series. The same vigilant observation should be exercised with patients who previously have had cancer in one breast, inasmuch as Kilgore[4] has reported an incidence of 7.5 per cent of bilateral mammary cancer in this group.

RADIOACTIVE PHOSPHOROUS IN DIAGNOSIS

This paper would not be complete without mention of a new diagnostic method reported by a group at the University of California.[5] These observers have shown that intravenously administered radioactive phosphorous concentrates selectively in breast cancer. Postoperative determinations of radioactivity in the surgical specimens revealed five to ten times greater concentrations in breast carcinoma than in benign tumors, inflammatory lesions and the normal breast tissues. Each patient received 300 to 500 microcuries of radioactive phosphorous 24 to 48 hours before the operation. Preoperative measurements of radioactivity in both breasts were then made by moving a Geiger counter over the skin. If the breast tumor was not too deeply situated and could be brought within a short distance of the Geiger counter, carcinoma could be diagnosed with a fair degree of accuracy. Thus far, the method has diagnosed metastases in axillary nodes and detected one early carcinoma developing in an intracystic papilloma. Although the procedure is still in the experimental stage, it shows great promise. It may well be one of the answers to the problem of diagnosing and locating early, barely palpable, breast cancers.

SUMMARY

The refinements of physical examination and special technical examinations for the diagnosis of early breast cancer are presented. Emphasis is placed on early detection, rather than on late "textbook" manifestations.

Two major characteristics of patient behavior which operate to deny physicians an opportunity of early diagnosis are reported. These two factors are: (a) failure in periodic self-examination of the breasts and (b) procrastination in seeking medical advice after discovery of the tumor. Both factors can be

corrected by physician education of the patient with a resultant lowering of the present high incidence of axillary metastases in 65 to 72 per cent of patients at the time of operation.

The relation of hereditary elements and specific benign breast lesions to the development of mammary cancer is reemphasized.

Early biopsy of specific breast lesions is stressed, and the limitations of aspiration biopsy and "wedge" biopsy are outlined.

The monthly examination of the breasts of pregnant women and lactating women is urged as the one hope for improving the poor prognosis of this group when breast cancer develops.

The recent use of intravenous radioactive phosphorous in the diagnosis of breast cancer is described.

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QUESTIONS AND ANSWERS

DR. MCCARTHY: Question: "What statistics are there on the castration of women in the childbearing age for the alleviation of symptoms of cancer of the breast?"

Dr. Horsley of Virginia has routinely performed a bilateral oophorectomy with radical mastectomy in all his premenopausal patients with breast cancer. He published a preliminary report in *Surgery* in April, 1944, which included 25 cases. In this series, 23 patients were alive and well at the time of publication. However, the follow-up interval was too short in most cases to be conclusive.* Nevertheless, I would like to emphasize two well established facts which lend support to the logic of castration, and which definitely relate ovarian hormones to breast cancer development and behavior. First, mammary cancer rarely develops in women who have been castrated for various other medical reasons; and finally, it has been shown that "inflammatory" cancer of the breast, which is the most aggressive and lethal type, is five times more common in pregnant women.

* *Author's Note:* A more recent and conclusive sequel has been reported by Dr. Guy W. Horsley in Annals of Surgery, 125:703, June, 1947. His five-year survival rate with oophorectomy was 76.9 per cent, as compared with a five-year survival rate of 43.5 per cent in cases treated with radical mastectomy alone.

REFERENCES

1. Bartlett, E.I.: Curability of cancer of the breast, West. J. Surg., 41:243 (May), 1933.

2. Eggers, C., de Cholnoky T., and Jessup, D. S.: Cancer of the breast, Ann. Surg., 113:321 (March), 1941.

3. Geschickter, C. F.: Diseases of the breast, Philadelphia, Lippincott Co., 1943.

4. Kilgore, A. R.: Precancerous lesions of breast, West. J. Surg., 40:581 (Nov.), 1932.

5. Low-Beer, B. V. A., Bell, H. G., McCorkle, H. J., Stone, R. S.: Measurement of radioactive phosphorous in breast tumors in situ: a possible diagnostic procedure, Radiology, 47:492, 1946.

6. MacDonald, I.: Mammary carcinoma. A review of 2,636 cases, Surg. Gynec. & Obst., 74:75 (Jan.), 1942.

7. Nathanson, I. T., and Welch, C. E.: Life expectancy and incidence of malignant disease, Am. J. Cancer, 28:40 (Sept.), 1936.

8. Sistrunk, W. E., and MacCarty, W. C.: Life expectancy following amputation for carcinoma of the breast, Ann. Surg., 75:61 (Jan.), 1922.

9. Taylor, G. W., and Nathanson, I. T.: Lymph node metastases, incidence and surgical treatment in neoplastic disease, Oxford, London, 1922.

10. Warren, S.: The relation of "chronic mastitis" to carcinoma of the breast, Surg., Gynec. & Obst., 71:257 (Sept.), 1940.

11. Wevill, L. B.: Malignant diseases of the breast; statistical survey of 1,000 case records, Edinburgh M. J., 39:714 (Dec.), 1932.

12. Wood, D. A., and Darling, H. H.: A cancer family manifesting multiple occurrences of bilateral carcinoma of breast, Cancer Research, 3:509 (Aug.), 1943.

The Place of Radiation Therapy in the Management of Breast Cancer

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MY subject is a very controversial one; indeed, there are few subjects which are accompanied by more controversy than this one. There are those who would entirely exclude radiation therapy as a proper procedure in the management of this disease, and there are others who would make it the method of choice. From both of these views I dissent completely. Actually, the debate is almost entirely as to the extent to which irradiation should augment or even replace surgery in the treatment of this disease, and indecision is expressed even by those of the widest experience. Perhaps one should say that indecision is expressed *particularly* by those of the widest experience.

The entire issue is clouded by three factors: First, prejudice; the unwillingness of too many radiation therapists to concede that their weapon is not all-powerful, and the unwillingness of too many surgeons to concede that surgical treatment does not produce the results that we all devoutly wish it did. Second, the careless and unscientific use of tables of statistics. This is not the place to talk about statistics, but one or two elementary considerations may not be out of place. It is obviously wrong to compare, say, the results obtained in the treatment (by any method) of one hundred Stage IP cases of breast cancer with a like series of clinical Stage I cases treated by another method. It is unscientific to fail to weigh statistical tables for the normal death expectancy and for the normal survival rate. Third, the failure to recognize and to take into consideration the tremendous changes that have occurred in the technic of radiation therapy. The principle of protracted fractional irradiation has completely revolutionized radiation therapy, which bears about the same relationship to the therapy of 20 years ago that modern anesthesia bears to the ether pouring of the eighteen-nineties. Statistical tables based on the older therapy are entirely worthless as a basis of comparison, and practically all of the cases treated more than 15 years ago must be discarded as having no real significance. Thus, Harrington's survey of 3,137 patients followed for five years loses its importance as far as its bearing on the value of radiation therapy is concerned, since 1929 is the latest year in which a patient could have been treated and be included in his survey published in 1935. Greenough, in 1934, published the results of the study of 374 cases of breast cancer treated with external radiation and concluded that it added little to the patient's chance of survival. But here again the year 1928 is the latest year in which a patient could have been treated and included in this report.

These two authorities are widely quoted as though these figures had some present significance. So far as the place or the value of modern radiation therapy is concerned they are totally devoid of meaning. There are many such surveys in the literature. There is no question as to the ability, sincerity or sound judgment of those who have compiled such studies: it is only that the figures, once valid have lost their significance as to modern irradiation.

"If we are to dispute," said Voltaire, "let us define our terms." I think that there is general agreement that clinical Stage I breast cancer means that the tumor seems to be limited to a lobule of breast tissue; that the skin is uninvolved, and that no axillary or supraclavicular glands are palpable. Pathological Stage I means that no carcinoma cells could be found in the glands removed. Clinical Stage II carcinoma means that the skin is involved, or that palpable glands are present, or both. Pathological Stage II means that the skin was infiltrated, or that metastases to glands were demonstrated, or both. Stage III breast cancer indicates the presence of distant metastases.

A quotation from Pack and Livingston's "Treatment of Cancer and Allied Diseases" will serve as a sort of text for what follows. "Surgery no longer remains unchallenged as the sole method of treatment, or even as the method of choice in the management of any stage or type of mammary carcinoma." From this statement I shall dissent presently, but as a working text it states well the controversial aspect of the problem.

If we accept this dictum, how shall we apply it? What place shall radiation therapy assume? To what extent shall it augment surgery, and when, if ever, shall it be the method of choice?

Radiation therapy may be chosen in place of radical surgery in a Stage I or II tumor: (a) when the patient resolutely refuses surgery, or (b) when for some reason the operative hazard is too great. With but one exception these are the only valid reasons for attacking the disease in Stages I or II by any means other than radical mastectomy. This exception is the inflammatory type of carcinoma. The surgical treatment of this fulminating type of carcinoma is completely hopeless since the line of incision will invariably pass through the dermal and subdermal lymphatics which are plugged with cancer cells. The most radical excision will inevitably be followed by immediate recurrence and death. The

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tumor is extremely radiation sensitive, and good palliative results will follow irradiation. This is an extremely fatal form of breast cancer, and no actual cures or, better, five-year survivals are to be expected. The patient who is treated by irradiation will live longer, however, and in greater comfort, than one subjected to operation.

There is practically unanimous agreement that radiation therapy has no place in the treatment of Stage IP carcinoma, since there is little if any likelihood of improving the excellent results obtained by radical surgery. Since the axilla and supraclavicular regions are, by definition, free from the disease, there seems to be no point to subjecting the patient to the discomfort and expense of irradiation.

STAGE III CANCER

There is little dispute that radiation is the treatment of choice in Stage III breast cancer. Surgery may be useful in the removal of foul ulcerating masses, but in general the patients are given more comfort, and their lives are made more tolerable, by irradiation than by any other method. Interstitial radiation will heal many ulcerating lesions, and there are few things that afford one the satisfaction that results from observation, following irradiation, of the relief from pain due to bone metastases. Superficially ulcerating lesions may be successfully controlled by rather large doses of unfiltered, or very lightly filtered, radiation. If the lesion is not too large, Chaoul or contact therapy offers a simple and easy method of treatment. These methods, with very short anode-surface distances (*e. g.*, 2.0 cm.) and with very large outputs, enable one to give very large amounts of radiation without danger of injury to the deeper structures. With contact therapy, for example, the dose at a depth of 1.0 cm. is only 30 per cent of the surface dose, while at a depth of 4.0 cm. it is practically negligible. With larger ulcers, more than 3.0 cm. in diameter, low voltage unfiltered radiation may be employed. Platinum needles containing radium element may be introduced and left in place for periods of from 120 to 140 hours.

The following is an illustrative case: A 64-year-old woman was seen in September, 1939, with a history of a mass in the lower lateral quadrant of the left breast for three years past. As she had arthritis in her fingers, she had hoped that the breast tumor was part of the same process and, hence, had sought no advice. The mass had been painful for ten months preceding her first visit. She had a mitral heart lesion which was rather poorly compensated and required digitalis. Examination showed a hard mass, 6 x 5 x 3 cm., adherent to the skin of the breast, and with a soft area underlying a reddish purple skin, obviously about to ulcerate. There were massive rock-like axillary glands which were entirely immovable. Under novocain infiltration anesthesia, 15 platinum needles, having a wall thickness of 0.5 mm. pt. and each containing 1.0 mg. radium, were imbedded in the mass for 130 hours. High voltage x-ray therapy was directed at the axillary masses. Two months later the breast tumor was barely palpable, the axillary glands were reduced about 50 per cent, and all pain had disappeared. The patient had no recurrence of the breast tumor, nor did the axillary glands increase in size. She lived four years and died in congestive heart failure at the age of 68 years.

As to clinical Stage I cancer, I repeat that radical surgery is the method of choice. Occasionally, however, a patient will refuse to submit to operation, and there remains no choice but to employ irradiation. That this is not always unsuccessful is illustrated by the following cases: A woman aged 46, had a small mass in the upper and outer quadrant of the right breast, and submitted to biopsy. The pathological diagnosis was adenocarcinoma, Grade III. She firmly refused mastectomy and was treated only with external radiation therapy. The mass disappeared promptly and the patient is free from any evidence of disease six and one-half years later. I cite this case only as an interesting example of what may sometimes be accomplished and not to indicate that x-ray therapy should ever be the method of choice.

STAGE II CANCER

With this rather summary dismissal of the problems of Stage I and Stage III breast cancer, we find ourselves at the crux of the controversy, namely, how shall we treat Stage II cancer? How shall irradiation augment mastectomy; shall it be given before or after surgery, or both times, and when shall it replace surgery as the method of choice?

There is, in my belief, no justification for ever using irradiation rather than surgery. Stage II cancer of the breast, except inflammatory carcinoma, is best attacked by radical mastectomy and I would be unwilling to allow any exception to this unless it be the two previously noted, i. e., the patient refuses surgery, or the surgeon is unwilling to operate because of certain hazards.

There is rather general agreement that postoperative irradiation is imperative in the more anaplastic tumors of Grades III and IV. In the case of the more differentiated Grades I and II, agreement is not so unanimous. For myself, I am unwilling to accord so much prognostic value to tumor grading, for two reasons: (1) Unless multiple sections are made of practically the entire tumor no one can be sure that the growth reported as Grade II may not exhibit, five millimeters away, the lack of differentiation characteristic of Grade IV. (2) Radiation sensitivity is a purely relative thing. That a given tumor is highly radiation sensitive does not mean that it is radiation curable, nor does radiation resistant mean that no cellular effects can be produced. These terms mean only that some cells are more easily influenced than others, but a moment's reflection will persuade anyone that all cells may be influenced or even destroyed by irradiation.

It is not unreasonable, then, to maintain that all Stage II breast cancers should be irradiated. If the objection is made that statistics show a not very impressive increase in the five-year survival rate, there are two replies possible to the objection. If the increase were only 5 per cent, and if the five hap-

pened to include the objector's mother, wife or sister, the objection would become less valid. As it is, the survival rate is pretty bad; even a very little increase is desirable.

Moreover, here again the statistical tables must be viewed rather skeptically. Very few of them included any large series of patients irradiated with modern technique, and until we have accumulated such series the validity of these tables, in so far as the value of postoperative irradiation is concerned, is very doubtful. There is even greater dispute as to the desirability of preoperative radiation therapy. As a matter of fact, we do not know much about it. If there are any large series of cases treated by preoperative irradiation and radical mastectomy and followed for five years, I am unaware of them. Adair has reported a series and failed to find any appreciable improvement in the five-year results, but he neglected to point out that the patients included in his series were treated with a single dose of 700 r. To argue that such a series has any significance is like maintaining that amputation of the leg is a formidable procedure carrying a very high mortality rate, and supporting the claim by a reference to the mortality tables of the Civil War.

There are definite objections to preoperative irradiation. There is no way to know, for example, whether we are dealing with Stage I or Stage II cancer. One is likely to be encouraged to treat cases without a histological diagnosis having been made. Subsequent operation is unquestionably made more difficult, and the plastic results are likely to be less pleasing. A certain amount of time is lost in awaiting the completion of the irradiation and the subsidence of the subsequent reaction. On the other hand, one cannot but be impressed with the number of breasts removed and found sterile which had previously contained cancer.

The pros and cons of the question are thus somewhat balanced, and until someone has accumulated a significant number of cases thus treated, we had best suspend judgment.

There remains one question which should be answered: "Of what value, if any, in the treatment of breast cancer, is castration?" Here again, there is no sufficient weight of evidence to warrant a dogmatic statement. Cancer of the breast seems to be more lethal in menstruating women than in those past the menopause. The periodic engorgement of the breasts at or before menstruation is a familiar phenomenon, making it clear that the estrogenic substances secreted by the functioning ovary have a profound influence on breast tissue. It is known that breast cancer can be produced in mice by the injection of large doses of estrogenic substances. When one weighs these considerations against the harm that may possibly follow depriving a woman of her ovarian function, remembering that her life is at stake, it seems reasonable to add to our armamentarium the method of castration at least until it is proven to have no value. Irradiation of the ovaries of the postmenopausal woman is quite useless.

CONCLUSIONS

1. Irradiation therapy must not be evaluated on the basis of statistical surveys as much as ten years old.

2. Stage I mammary carcinoma should not be irradiated, but should be treated by radical mastectomy.

3. Stage III carcinoma of the breast should but rarely have any surgery, but should be treated entirely with irradiation.

4. Stage II breast cancer should be treated by radical mastectomy plus postoperative irradiation. The value of preoperative therapy is not established, but may be great.

5. There is little to lose and perhaps much to gain by the castration of menstruating women who have breast cancer.

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QUESTIONS AND ANSWERS

DR. GOIN: First question: "In Stage I cancer of the lower and inner quadrant where metastases may be inward and unrecognized would you use radiation therapy?"

No, I would not. The patient either does or does not have metastases. If she does, she will not be cured anyway, and if she does not she will likely be cured by the mastectomy. In general these cases must be dealt with as they present themselves.

Next question: "Do you feel it logical to treat the breast area postoperatively after adequate radical mastectomy—assuming you are going to treat the axilla and superclavicular area?"

Yes, I think that it is, because skin recurrences in the operative field are quite common.

Next question: "Please repeat the treatment of Stage III cancer of the breast relative to x-ray."

I said—and if I didn't I should have said—that it is entirely a matter of making the patient's life tolerable. We are not going to cure Stage III breast cancer. Radiation therapy will make life much more tolerable. Small surface ulcerations can well be treated by large doses of superficial x-ray therapy. Larger ones may be treated by intramural implantation of needles containing radium element. In general the results are fairly gratifying.

Management of Inoperable Cancer of the Breast

Eric Reynolds, M.D., *Oakland*

EARLY clinical diagnosis of mammary cancer is seldom easy and the record of cures among those cases considered operable is anything but encouraging. It is apparent that doctors are obliged to deal with a large group of patients for whom some program of palliative management must be carried out. Care of the patient with an inoperable or metastastic lesion is a challenge which has to be met on the basis of the individual case. Following routine rules seldom leads to the best results.

HORMONES

The role of hormones in the genesis and control of neoplastic disease is but vaguely understood. It has been shown that estrogens produce mammary carcinoma in some strains of mice. It has been conclusively shown that estrogens inhibit the growth and spread of carcinoma of the human prostate in certain instances. Both androgens and estrogens have been used in the treatment of carcinoma of the human breast. Until recently the reports of results of such treatment appearing in the literature have been widely different and in some cases confusing. More recent analyses of series of cases so treated indicate how a favorable selection of patients may be made and more or less predictable results obtained.

A fairly large series of cases of advanced carcinoma of the breast has been treated with hormones by English investigators and recently this method has been tried at the Memorial Hospital in New York. Reports seem to agree on one or two points. First, that there is a favorable response in perhaps 40 per cent of cases, particularly in those patients well past the menopause and over 60 years of age. There also is evidence that in young women, and particularly in those around 40 years of age, estrogenic hormone may accelerate the progress of the disease. This is interesting in view of an analysis of 5,000 cases of carcinoma of the breast made by Adair which shows that the peak incidence of cancer of the breast is at 45 years and that another peak occurs at the age of 60. Much remains to be learned about this method of management by hormones. Evidence at present tends to show that the androgenic hormones are of more value in treating carcinoma of the breast in women. With effective doses of estrogen, uterine bleeding, sometimes of a serious nature, was produced in approximately 50 per cent of the cases treated.

Many of the early failures with androgens were probably due to inadequate dosage. Adair has stated that 100 mg. intramuscularly three times a week for a period of eight to ten weeks and totalling up to 3,000 mg. was necessary for effective results. He frankly admits that final conclusions as to the exact dosage and the duration of treatment are not established. The high cost of testosterone propionate hampers the general use of this agent. It appears at this time that the most striking results of the use of testosterone therapy are in those cases where the involvement is of the skeletal tissues. In such cases the improvement frequently is not only clinically patent but demonstrable by x-ray. Associated with testosterone therapy there is a rise in the serum alkaline phosphatase and a diminution in the blood calcium level. These are indications of repair in skeletal tissue. How long improvement which follows androgen therapy will endure is not known, but two of the cases enumerated by Adair have been living for a period of nearly two years free of symptoms after commencing treatment.

It appears that only a small percentage of improvement can be anticipated when cancer involves such tissues as liver, lung, brain, and skin. Present indications are that testosterone is superior to x-ray therapy for bony metastases. Advocates of the use of testosterone as an adjunct in operable carcinoma of the breast and as follow-up prophylaxis in cases apparently successfully operated upon, are coming forward. Experimentation on cancer of other organs such as ovary, uterus, adrenal, testicle, and thyroid, is adding information which is helpful in delineating the effects of this method of treatment. It must be borne in mind that there are a number of very striking side effects which are produced by testosterone therapy in metastatic breast cancer. Some of these are beneficial, some definitely detrimental, and others of a dubious nature. There seems to be nearly always a gain of weight and a sense of well-being sometimes amounting almost to euphoria, in most of these patients. On the debit side are the signs and symptoms of masculinization evidenced by masculine hair distribution, the development of a deep voice, and enlargement of the clitoris, and frequently the appearance of acne not unlike that seen in adolescent boys. Nearly all investigators and experimentors with this agent have noted an increased libido in the treated individuals.

ANALGESIC AGENTS

The effect of analgesic agents on pain is an important consideration in the management of inoperable cancer. Pain is a subjective experience and hard to measure quantitatively. However, there have been one or two methods developed in the pharmacology laboratories for the quantitative measurements of the thresholds of pain perception. One of the best known and perhaps the most reliable is the use of a rheostat-controlled light shining on the blackened skin. Pain is produced by heat in the area so lighted.

Read as a part of the panel discussion of breast tumors before the sections on Anesthesiology, Radiology, General Practice, Pathology, and General Surgery at the 76th Annual Session of the California Medical Association in Los Angeles, April 30-May 3, 1947.

By varying the degree of heat, and with it the pain, the effectiveness of analgesic agents in raising the pain threshold can be measured. Using the response to morphine as a standard and taking the analgesic potency of it as 100, it was found that the potency of aspirin was 35, of alcohol 40, and demerol and dilaudid 105. It was also noted that placebos raised the threshold by the factor 45 in certain instances. This of course tends to minimize the value of any quantitative measurement, but we are all familiar with the fact that if no anxiety exists or if the subject is preoccupied at the time of the test, pain is better tolerated and sometimes even ignored by the same individual whose threshold is lowered if he is anxious, worried, or bored. It was also noted that alcohol was very prompt in its analgesic effect, that when it was given in conjunction with aspirin the effect lasted over a longer period of time, and that the maximal effect was obtained with 30 cc. of alcohol and 0.3 gm. of aspirin.

There is at present no known ideal analgesic substance, and most of them have untoward side effects, such as nausea, depression, constipation, or addiction. It also seems that euphoria and analgesia go hand in hand. For many years morphine has been the basic standard of values. It has a relatively long action and a relatively high euphoric effect. It is more effective against steady than intermittent pain and a greater dosage of it is required to control existing pain than when it is to prevent anticipated pain. The effect of dilaudid, a derivative of morphine, is of shorter duration and it has a less somnifacient and probably less nauseating and constipating effect than the parent drug. Euphoric effects of dilaudid are a little less, but addiction seems to be about the same as for morphine. The drug can be tolerated by some individuals who are intolerant to morphine. Pantopon, a mixture of the alkaloids of opium, is about the same as morphine in action and in the effects and side effects it produces. Codeine is weaker, less nauseating and constipating than morphine, and it seems to be less likely to cause addiction, true addicts shunning it because it does not have the euphoria-producing properties of morphine.

Analgesia is produced by a widely different group of chemicals, and it is impossible to predict from chemical structure whether or not a substance will have pain-relieving properties. Demerol is a substance which illustrates the case in point. It is related to atropine and was discovered in searching for atropine substitutes. It is, however, narcotic in action and has analgesic plus spasmolytic and sedative action. The period of its action is somewhat shorter than that of morphine. It does not produce constipation. It produces less euphoria, and addiction to it is a matter of debate at present. Where spasm is a factor in the production of pain, it has special values.

The discussion of the relief of intractable pain would not be complete without mention of the intraspinal use of ammonium salts. In carefully selected cases where nerve roots of lower segments are involved, this has appeared to give good results and is worthy of further trial by more clinicians. Judovich and his co-workers in Philadelphia advocate its use, using four mg. of ammonium chloride or sulphate, adjusted to a pH of 7.2 administered in 50 cc. of spinal fluid without the use of previous spinal anesthesia. They report the incidence of more pain for a brief period followed by varying degrees of satisfactory relief.

A few cases of bowel and bladder complications following use of it have been reported.

A choice of the various narcotic and analgesic substances is largely an individual one both as regards the physician and the patient. The possibility of addiction in individuals who have hopeless carcinoma with pain should be no deterrent to the effective use of opiates. Alleviation of suffering from this disease should be the principal consideration.

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Rural Medical Care and Hospitalization

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THE provision of adequate medical care for rural populations is, and has been, one of the most sluggish and least popular branches of the broad field of modern medical development. This is due largely to lack of concentrated capital and personnel requisite for proper organization of the necessary facilities.

The rural practitioner has been handicapped by numerous factors. First, doctors are burdened with excessive case loads and long traveling distances. Second, excessive costs of laboratory equipment, hospital facilities and salaries makes individual operation or ownership difficult or impossible. Third, competitive and proprietary institutions with inadequate facilities have, by and large, defeated the purpose of expansion and modernization comparable with advances in the medical field generally. Fourth, public interest and individual initiative so necessary to continued progress in any project are, in the country, more inert to progressive changes and more subject to stifling provincialism.

Little wonder that the country doctor and his practice is the frequent subject of jests as a relic of the past. Be that as it may, the epitaph of "Dr. John Goodfellow, Office Upstairs" still remains solid in the hearts of his appreciative clientele. He still is the barrier between them and fear of illness and death. His failures too often result from circumstances largely beyond his individual control.

The speed and precision of modern life is now incompatible with the present state of rural medical practice. Farm life and industry are mechanized and the rural populace is as intellectually advanced as its city cousins. Neither the younger generation now returned from military service, nor the older adults who are well read and alert to modern trends in all phases of living, will be content for long with inferior medical care or slow in discerning inadequacies. Rh factor, antitoxin, biopsy, penicillin, streptomycin and many modern terms have supplanted the antique "germ," "microbe," "drugs," "dope" and "pills," for the most part.

With nearly 14 years of practice in a small agricultural valley, fortunately located within 45 miles of San Francisco, but so peculiarly isolated geographically as to remain definitely rustic, the writer is prompted to articulate some of the particular and peculiar problems, together with suggestions for their ultimate solution.

THE DOCTOR—POSTGRADUATE AND CONTINUATION TRAINING

Individual rural practice almost invariably prevents any but brief, cursory and superficial pursuit of postgraduate training without the disruption of the continuity of care of individual patients and practice in general. Extended postgraduate study usually results in the physician or surgeon leaving the community for wider fields with greater facilities. The average country practitioner usually begins practice with from one to perhaps three years of hospital training as a background for practice. It is the exceptional physician indeed who could not profit greatly by periodic six to twelve-week practical courses in one or several branches of medicine at one to three year intervals. Such courses should be readily available at not too great a cost in time, money and sacrifice to himself and his family.

There is little basis for argument as to the value of short courses presenting practical and theoretical material to the individuals of more or less limited training and experience in any field. The problem is to provide this training simply, efficiently and economically. With all due regard to the faculties and organizations providing the present postgraduate courses, they leave much to be desired. Week-long refresher courses are necessarily limited to a few hundred applicants. The limited enrollment of the "once a week" courses held in a central metropolitan area is limited to a relatively narrow zone and number of individuals. The "team-clinics" sent out to the hinterland can only present a very brief and limited course with very slight opportunity for practical participation by the recipient. In short, present facilities are mere tokens of the desirable manna.

A plan designed to fit many of the requirements for postgraduate training for the physician in general practice can be outlined as in the accompanying chart. The scope and ramifications are at once apparent. The financial involvement seems insurmountable. The procurement of hospital and teaching facilities, the development of a teaching staff and the clerical assistants, the integration of the program with existing medical school training, are all promethian tasks. The answer lies not only in the response or demand of the doctor in general practice but in the voice of the entire medical profession in answer to the query, "Is it worth it?"

If the present hue and cry for improvement of the profession and particularly the status of the "general practitioners" is anything but lip service, the answer is definitely in the affirmative.

No comprehensive postgraduate schools open to men in general practice exist west of the Mississippi. Is this not another challenge to California Medicine? If the recent premise is true that general practice is a separate entity or "specialty" should we not have facilities for training the recent graduate beyond those presently available?

The rural communities need certified men but this may not be immediately feasible or practical, nor is it particularly economic for the more isolated regions. The writer should rather suggest the team principle, with each practitioner developing his own

particular aptitudes and preferences, supplemented by periods of postgraduate training and integrated with those of his fellows in meeting the needs of the community, assisted by a well organized consultative service recruited from the more populated adjacent cities. This is by no means a new idea but the development of the program is still largely a matter of chance selection rather than purposeful design. Petty personal and professional jealousies and false concepts and interpretation of medical ethics have too often defeated this type of development.

COMBINED OFFICE FACILITIES

The presence of two or more individual office units is as uneconomical as it is inefficient. The duplication of expensive x-ray, laboratory and therapy equipment needs no further condemnation. Pooling of facilities, cooperative use of personnel and equipment in carefully designed quarters provides for more efficient use of a wider variety of technical and special services. The elimination of one or more unskilled employees would provide a salary for a trained laboratory technician. The personnel for rural practices must necessarily be diversified in their abilities and training and not necessarily too highly specialized. There is not place (nor enough work in the average rural doctor's office) for a trained laboratory technologist. As a result, one of the personnel is impressed into doing routine urines and blood counts in an indifferent fashion with an unknown percentage of error. or the doctor wastes his valuable time or holds the laboratory work at an irreducible minimum and so neglects this important factor in diagnosis. Improvement lies in the direction of mutual assistance and cooperation in the profession.

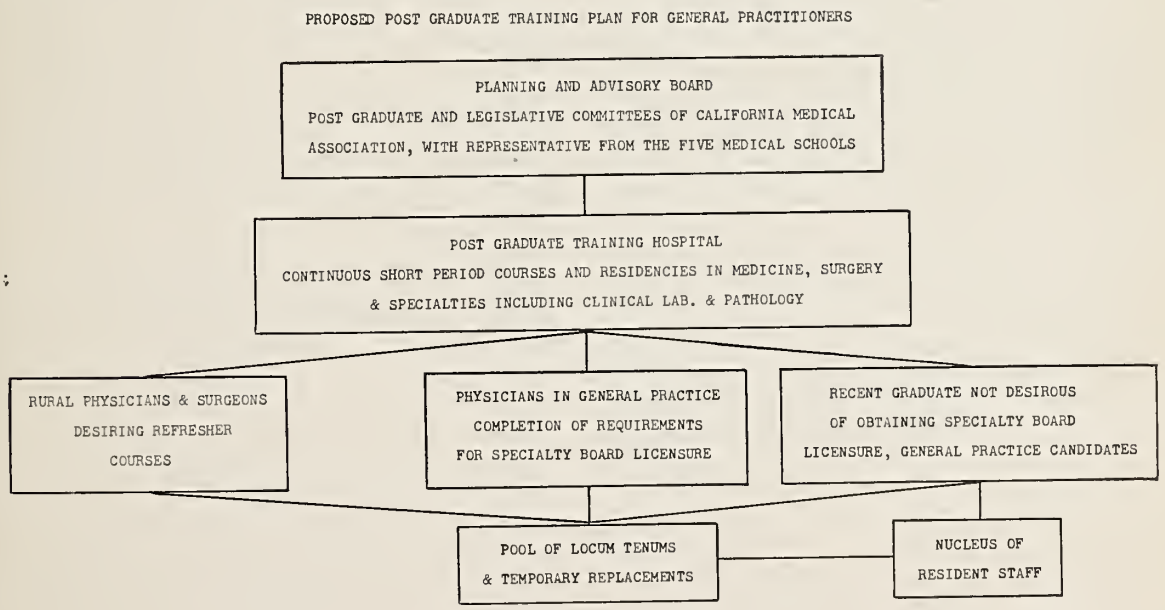
THE HOSPITAL

The universal plea of rural physicians and patients alike is for more adequate hospitalization. The immediate thought is for the prompt care of the present sick individual. The underlying and often neglected principal benefit of the hospital to physician, patient and community is in *improved* medical care and service. The personal experience of this writer in hospital organization and development is illustrative of this point.

The only hospital available to the Sonoma populace was a proprietary sanitarium operated by an elderly practical nurse from 1922 to 1939. The bed capacity increased gradually, through additions, from one bed to eventually ten beds with four nursery cribs. One room served as surgery and delivery room combined. The equipment and furnishings were superannuated. There were no laboratory facilities. In 1941 a modern delivery table was installed by the writer. A very antique portable x-ray was installed in 1939. It was replaced in 1942 by a modern mobile unit. Management from 1939 to 1944 was by a layman with no previous hospital administrative experience. From 1944-1945 for a period of nine months the sanitarium was operated as a non-profit partnership by the three practicing physicians in the community with a full time business manager.

During the years 1942 and 1943 an application under the Lanham Act failed to obtain funds to purchase and equip an existing state-owned hospital building in the community which was to be disposed of as a result of wartime economies of personnel and materiel. In August of 1944, the poor health of the lay owner and manager of the very inadequate and out-of-the-way sanitarium necessitated the formation of a non-profit partnership of the three practicing physicians of the community to take over its operation, in order to maintain service for medical, obstetrical and minor surgical cases.

Early in 1944 general meetings in the community were begun by securing the general support of the civic and community organizations. This resulted in



the formation of a hospital committee under the chairmanship of the writer and included representatives from every part of the community, with all the doctors acting in an advisory capacity. This movement resulted in the formation of a non-profit organization, the Sonoma Valley Community Hospital, which was incorporated through the offices of a local attorney.

A tentative budget was set up for the rehabilitation and operation of the previously mentioned state-owned hospital building. This budget included rental of the building on a long term lease from the private individual who had meanwhile acquired the building and surrounding property from the state.

A fund-raising campaign was undertaken by the committee under the chairmanship of the local high school principal, on the stipulation that the Board of Trustees undertake the long range program of insuring the permanence and perpetuation of the hospital assets. This was proposed to be done through the formation of a district, similar to school, irrigation or other administrative district.

According to the plan of the Board of Trustees, the original budget estimate called for raising $25,000 which included a 15 per cent reserve contingency fund. The funds were raised by private subscription, a contribution of from $5 to $100 entitling the donor to one non-assessable voting membership in the non-profit corporation plus an additional voting membership for each additional $100 contributed. A total of $33,444 was raised, of which $5,135.95 was spent on alteration, $15,405.93 for equipment and $3,298.44 for supplies, leaving $9,603.88 unexpended.

Our local attorney, together with a subcommittee and with the assistance of Senator Herbert W. Slater of Santa Rosa, prepared a provisional bill with the assistance of the Legislative Advisory Committee in Sacramento on November 9, 1944. The proposed bill was submitted to and discussed with the chairman of the Legislative Committee of the California Medical Association, Dr. Dwight H. Murray, and legal counsel of the California Medical Association, Mr. Hartley Peart and Mr. Howard Hassard, for suggestions and criticisms. In January of 1945, Senate Bill 586 was introduced by Senator Slater, ultimately passed and signed by Governor Earl Warren on June 18, 1945. (A similar bill had been introduced into the same session of the Legislature by Senator Chris N. Jesperson but was withdrawn in favor of Senator Slater's bill.)

The bill provides for the formation of districts in a county or portion of a county or adjacent counties of a population of 200,000 or less, according to the usual form of procedure prescribed for this and similar districts. It requires that a petition, signed by 15 per cent of the registered voters of the district be presented to the County Board of Supervisors. Election is set and held in the district designated and the district is formed if a majority of the vote be in favor. A resolution, so stipulating, is filed with the Secretary of State in Sacramento by the County Board of Supervisors.

Annexation of land is provided for by the same procedure. The five members of the Board of Directors, residents and regular voters, hold office for a term of four years. The first board is appointed by the county board of supervisors and members are replaced or reelected in the next two general elections. The duties and powers are prescribed as to execution, administration and management of the hospital. Rules and regulations are set up and rates established to permit operation of the hospital on a self supporting basis.

The fiscal provisions of the original bill were as follows:

1. Daily receipts paid into the treasury of the district in a special operation fund and used for payment of operating expenses, construction costs and interest on bonds, and to maintain a reserve fund;
2. A local hospital district fund is established in the county treasury;
3. An annual assessment based on the hospital budget submitted to the county board of supervisors together with a petition for tax levy not to exceed 20 cents per $100 valuation;
4. A capital outlay fund;
5. Special assessments;
6. Bonds.

On November 4, 1946, the California Supreme Court handed down a decision validating bonds issued by such districts, pursuant to the stipulations in the bill. On January 21, 1947, Senate Bill 227 was introduced by Senator Slater which clarified the financial provisions, provided for a bonded treasurer and validated actions taken by any districts prior to the passage of this amendment. This was passed by the senate and the assembly and subsequently signed by Governor Warren as an emergency measure effective immediately.

Assembly Bill 64 introduced by Mr. Dunn of Alameda County providing for an amendment to the Hospital District Law permitted districts to be formed in counties of populations up to 500,000, as compared with the previous 200,000 population limitation.

Twenty-four districts are now actually organized. A county-wide district was organized in Del Norte County and is in operation. This district, which has taken over the Knapp Memorial Hospital, provides care for indigents at county expense in addition to the private patients.

May 1, 1947, the Sonoma Valley Community Hospital Board of Trustees officially assigned its properties and assets to the Board of Directors of the Sonoma Valley Hospital District, which was formed as a result of an election held March 19, 1946. It thereby became the second hospital district in actual operation.

The Local Hospital District Law appears to be a definite advancement for rural medical care. It is locally controlled by individuals cognizant of their particular hospital problems. It is relatively devoid of political domination and pitfalls, unless subsequently altered, and it provides a simplified procedure for raising funds for initial construction.

equipment and maintenance through economic fluctuations so frequently disastrous to smaller private and proprietary institutions.

This bill, as an instrument of the medical profession and the people, requires the constant efforts of the local physicians and members of the medical staffs, as its efficiency and usefulness must necessarily depend upon the intelligent advice and supervision by the profession working cooperatively with the lay individuals and groups. Due to strict interpretation of the State Code relative to direct or indirect contract between a member of a state, county or municipal tax supported institution. the medical profession is barred from hospital district board membership, but its influence can be made effective through tactful assistance.

A great deal of assistance may be derived from advice and material from the State Department of Health, Bureau of Hospital Surveys, under the direction of Dr. P. K. Gilman and staff. This will be mainly in coordination, reduction of duplication and efficient overall planning.

As to the efficiency of small hospitals in providing hospital care, a summary of the last annual statement of our community non-profit hospital organization is as follows:

JANUARY 1 THROUGH DECEMBER 31, 1946

HOSPITAL OPERATIONS

Receipts		$74,108.81
Expenses	$27,444.91	
Salaries	30,730.39	58,175.30
Operating gain		$15,933.51

SERVICES RENDERED

Medical	404
Minor surgery	140
Major surgery	68
Orthopedic	26
Obstetrical	168
Caesarean	7
Newborn	175
Total admissions	995
Adult bed complement	22
Total in patients	760
Total patient days	5,985
Daily average patients	16 83
Average per cent occupancy	75.59%
Average patient stay	7.87
Newborn bed complement	4
Total newborn patients	175
Total newborn days	1,332
Daily average newborn	3.70
Average per cent occupancy	99.25%
Average newborn stay	7.61
Expired: Under 48 hours	8
Over 48 hours	18
Stillborn	1

The hospital is the central unit in the consummation of the program for rural medical care. As such it should function to consolidate the medical profession and the community as a whole into a unit for improving the general health. If these developments in rural medical care progress as rapidly as is indicated by the organization of the 24 hospital districts since Senate Bill 586 was enacted, a great increase in diversified local hospital personnel will be immediately needed. This personnel is now inadequately provided for in the curricula of any of our state, public or local schools, hospitals or institutions. It behooves the entire medical fraternity to take cognizance of this problem and institute immediate steps to implement this field of medical progress. Education of personnel of the district hospitals may be assisted through the services of itinerant supervisors in various branches of hospital operation.

The Sonoma Valley Community Hospital Board of Trustees was particularly fortunate in having available personnel from which to recruit a staff. Nevertheless, the ultimate organization and placement of the individuals was only possible through careful selection, advice and the board members' own personal study and desire to ensure proper and effective hospital operation. There have been and still are a multitude of problems requiring improvement if not correction. There is no "Blue Book" to guide the course. The speed of solution is directly proportional to the energy and diligence applied by the naturally constituted leaders, the medical profession.

SUMMARY

1. Personal observations of the requirements of present day rural medical practice based on the experience of the past 14 years' practice in Sonoma, California;

2. An argument presented for more frequent and comprehensive short periods of postgraduate training for the doctors, by means of providing a plan for continuous operation of a postgraduate hospital and service available to recent graduates as well as those already experienced in practice;

3. Modernization of office facilities and personnel for more efficient and accurate operation proposed;

4. Description of efforts and accomplishments in improved hospitalization through the development of the Local Hospital District Law and its application to an individual community;

5. Small hospitals can provide efficient, adequate and economical care and as such are the central units in solving the problem of Rural Medical Service;

6. Adequate overall progress requires the training of a large corps of new personnel not now provided for. This burden will necessarily fall upon the shoulders of organized medicine and its subsidiaries for planning, guidance and instruction.

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Oral Substitution Therapy with Benzestrol for Patients with Estrogen Deficiency

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OVARIAN hypofunction with estrogen deficiency is a common clinical problem. At times it is possible to correct this condition by improving the function of the ovary. When it is impossible to increase estrogen production, because of the menopause or some other condition, and undesirable symptoms occur, one of the estrogenic substances is given to the patient for temporary relief. This substance may be administered by injection, a method with obvious disadvantages,[9] or by way of the gastro-intestinal tract.

Three types of substances have been used orally for substitution therapy: the natural estrogens such as ethinyl estradiol[7] and conjugated estrogens-equine;[6] the stilbenes, synthetic drugs with estrogenic properties, diethylstilbestrol dipropionate[5] and hexestrol;[8] and a new substance, benzestrol, unrelated to either the stilbenes or natural estrogens. The latter substance has been given, in this investigation, to 157 patients. The present paper deals with the results of its use.

Benzestrol, originally called 113B and Octofollin, has been found to be an effective form of oral estrogenic therapy for women.[3,4,12,13,14,15,17,18] Also, it has been administered locally in vaginal suppositories[12,13,14] and parenterally in oil with satisfactory results.[11,12] Prior to clinical investigation, Blanchard, Stuart, Tallman and Stebbins studied the response of rats to this new synthetic drug and found that it had desirable estrogenic properties.[1,2,16]

Benzestrol* is 2,4-di(p-hydroxyphenyl)-3-ethyl hexane. It is supplied in tablets of 0.5 mg., 1.0 mg., 2.0 mg. and 5.0 mg. The tablets are scored so that they may be broken into two equal parts. The daily dose can be divided into two, three or four parts and administered two to four times daily. Frequent administration of the tablets produces a more constant supply of hormone in the blood and is, therefore, more effective. This fact has been demonstrated by implanting pellets of hormone in the body. The resultant continuous absorption has been shown to produce a greater effect mg. per mg. than the intermittant absorption from injections of hormone once or twice weekly.[10]

CLINICAL MATERIAL

There were 56 cases of natural menopause,† 30 cases of artificial menopause, 30 cases of other conditions with symptoms of estrogen deficiency and 41 cases of conditions without estrogen deficiency. The ages of the patients ranged in years as follows: natural menopause, 39 to 59; artificial menopause, 22 to 58; other conditions with symptoms of estrogen deficiency, 14 to 66; and conditions without estrogen deficiency, 17 to 56. Of the patients in the natural menopause or climacteric period, 29 were no longer having menstrual period, but 27 were still having them, 18 regularly and nine irregularly. None of the artificial menopause patients were having menstrual periods. Of the patients with estrogen deficiency due to other causes, 11 were menstruating regularly, eight irregularly and five infrequently, but six were not having periods. Of the patients without symptoms due to estrogen deficiency, 23 were menstruating regularly. five irregularly and four infrequently, but nine were not having periods.

Individuals in the artificial menopause group previously had had the following operations and treatments: hysterectomy, 19 patients; bilateral oophorectomy, 11 patients; unilateral and partial bilateral oophorectomy, seven patients; x-ray therapy to the ovaries, five patients; and intrauterine radium treatment, one patient. In the group of other conditions with symptoms of estrogen deficiency the following diagnoses were made: ovarian deficiency, ten cases; primary and secondary amenorrhea, eight cases; dysmenorrhea, four cases; premenstrual tension, three cases; senile vaginal atrophy, three cases, frigidity, one case; and chronic mastitis, one case.

RESULTS

A satisfactory result with at least 50 per cent relief of symptoms was obtained in 43 of the 56 patients with natural menopause, or in 76 per cent. Five patients received no benefit, but since they responded to other estrogens, they were included in this group. For further details of the group see Table 1, which also includes the results with six individual patients to show the percentage of relief due to various daily doses.

Twenty-six patients in the artificial menopause group obtained at least 50 per cent relief of symptoms. This was 87 per cent of the number treated. These results are found in Table 2 along with the data on four individual patients.

The estrogen deficiency symptoms in a number of other conditions were decreased by 50 per cent or more in 19 patients with an average daily dose of 7 mg. Less than 50 per cent improvement was obtained in 11 patients with an average daily dose of 6 mg. These figures do not give the per cent of improvement in the conditions themselves, such as amenorrhea, dysmenorrhea, senility, etc., but only show the per cent of relief from the hot flashes (in a few patients), nervousness and other symptoms of estrogen deficiency of which the patients complained and the objective estimate of per cent of improvement in

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*The Benzestrol used in this study was obtained from Schieffelin and Company, New York.

† The word, menopause, throughout this article is used to include the entire climacteric period, and thus its use is not restricted to the time of cessation of menstruation.

TABLE 1.—*Results with Benzestrol in the Natural Menopause*

Per cent relief*		100	90	75	50	25	10	0
No. of patients treated		21	4	8	10	8		5
Average daily dose		8 mg.	9 mg.	11 mg.	6 mg.	6 mg.		12 mg.
Examples of individual cases with daily dose	Patient #6			15 mg.	10 mg.	5 mg.		
	Patient #24	15 mg.	10 mg.		5 mg.			
	Patient #25	15 mg.			10 mg.	5 mg.		
	Patient #84		10 mg.		5 mg.	3 mg.	2 mg.	1 mg.
	Patient #133				10 mg.	5 mg.		
	Patient #153				5 mg.			2 mg.

* It is realized that it is impossible to judge the amount of relief by exact percentages, but because of simplicity the following figures are used in Tables 1, 2 and elsewhere instead of their descriptive equivalents:

(1) 100%—patient entirely free of symptoms.
(2) 90%—patient almost entirely free of symptoms.
(3) 75%—more than 50% improvement but not free of symptoms to the extent of those in group (2).
(4) 50%—patient still has about half of her symptoms.
(5) 25%—less than 50% improvement but having definitely more benefit than those in group (6).
(6) 10%—very slight but noticeable improvement.
(7) 0 —no improvement.

infantile uterus and breasts, personality, atrophy of the vaginal mucosa, etc.

When benzestrol was given to patients with poor vaginal cell cornification, vaginal smear tests showed an increase in the amount of glycogen in the cells and greater cornification. Likewise, an increase in vaginal moisture was frequently noticed. The effect of estrogen stimulation was also observed in the breasts as a few of the patients stated that tenderness in the breasts was caused by taking the tablets. Examination at that time showed greater fullness of the breasts and, in the younger women, an increase in breast development.

Six patients with psychoneuroses, one with manic-depressive psychosis and one with migraine headache received an average daily dose of 5 mg. of benzestrol. An average of 50 per cent improvement seemed to have been obtained in these cases, but relief was believed to be either psychological or due to the pharmacodynamic action of the drug, rather than to its estrogenic activity.

Thirty-three patients, most of whom were classed as psychoneurotics and in whom no estrogen deficiency was believed to exist because of the absence of true hot flushes and other symptoms, were treated with benzestrol in varying amounts from 1 mg. to 15 mg. daily, the average daily dose being about 7 mg. In all these patients, nervous symptoms similar to those of estrogenic deficiency were present, and each patient believed that her condition was due to ovarian deficiency. In some cases the patients had "sweats" and it was difficult to be sure that they were not hot flushes. Five of these patients had had hysterectomies. No beneficial result was obtained in this group, which substantiated the clinical diagnosis.

Benzestrol caused some patients during continuous treatment to have changes in menstruation that were considered undesirable. Uterine bleeding was produced in five menopause patients taking 15 mg. daily. Three of these patients had had bilateral oophorectomies. Menstruation became too frequent in one patient who was taking 3 mg. daily, and it decreased in amount in three patients taking daily 2.5 mg., 3 mg. and 5 mg. respectively. A menstrual period was missed when the following daily doses of benzestrol was given to four patients: 2.5 mg., 5 mg., 5 mg. and 10 mg. Dysmenorrhea was caused in one patient who was taking 15 mg. daily. In all, there were 14 undesirable effects, which comprised 11 per cent of the 132 patients with intact uteri.

Other changes were classed as desirable. Menstruation, previously occurring early, started more nearly on time in three patients with an average daily dose of 9 mg. Mid-period spotting stopped while one patient was taking 15 mg. daily.

Eight patients had changes in menstruation that were probably not caused by the tablets.

Incidentally, one patient became pregnant during a course of treatment with 3 mg. daily.

TOXIC REACTIONS

Undesirable symptoms were caused by benzestrol in 11 patients (7 per cent). Five patients (3 per cent) had gastro-intestinal disturbances, four with nausea and one with loss of appetite. The following symptoms were also troublesome in the same five patients: acid eructations, one patient; "bad taste in the mouth," one patient; general malaise, one patient; and diarrhea, one patient. Three patients (2 per cent) had itching of the skin, two with a rash and one with general malaise. Three patients (2 per cent) became very nervous while taking the tablets. In addition, one of these patients had flushing of the face and one complained of dizziness.

The average daily dose given to the patients who developed toxic reactions was 9 mg. A smaller dose

TABLE 2.—*Results with Benzestrol in the Artificial Menopause*

Per cent relief		100	90	75	50	25	10	0
No. of patients treated		9	3	8	6	1	1	2
Average daily dose		10 mg.	17 mg.	10 mg.	12 mg.	5 mg.	2 mg.	10 mg.
Examples of individual cases with daily dose	Patient #42	15 mg.	10 mg.	6 mg.		2 mg.		1 mg.
	Patient #74		15 mg.			5 mg.		
	Patient #111	20 mg.	15 mg.		10 mg.		5 mg.	
	Patient #156	15 mg.	10 mg.			5 mg.		

could have been given to some of the patients without causing symptoms. This effect of a change in the dose was demonstrated in three patients. Nausea stopped when the dose was cut from 15 mg. to 5 mg. daily. A "driven feeling" reported by a patient taking 10 mg. daily was no longer present when 5 mg. was used. A rash and itching of the skin produced in one patient by 5 mg. daily cleared up on 1 mg. daily. This latter patient, however, had very little relief from her hot flushes on 1 mg. daily although 5 mg. daily gave 50 per cent relief.

Nine patients (6 per cent) had symptoms that were probably not due to the tablets. Three patients were slightly more nervous, but they preferred to continue taking the tablets as they felt better in general. One patient who complained of sleepiness before taking the tablets thought she became a little more sleepy. Three patients complained of gastrointestinal symptoms, but in one case there was gastric ulcer, in another, colitis with similar "attacks" previously, and in the third, "all medicines upset the stomach." It was thought by one patient that the tablets caused hives, but this supposition was probably untrue as urticaria occurred frequently before taking the tablets. One patient complained of a "pressure in the head" which lasted only a short time even though the tablets were continued.

DISCUSSION

Benzestrol gave most of the patients satisfactory relief of their estrogen deficiency symptoms. This improvement occurred whether the condition was caused by primary or secondary ovarian failure during the menacme, by the natural or artificial menopause or by senility. With this treatment the response was less intense than it was when diethylstilbestrol dipropionate or hexestrol were used. Thus a larger dose was necessary when benzestrol was used instead of the stilbenes, and the amount usually employed ranged from 5 mg. to 15 mg. daily. This dosage gave satisfactory relief to 76 per cent of the patients with the natural menopause and to 87 per cent of those with the artificial menopause. These figures compare favorably with the results previously obtained with other estrogenic substances.[5,6,7,8] While no attempt was made to get 100 per cent improvement in a greater number of the patients by employing larger doses, it was believed possible to do so because some patients responded much better to 15 mg. than to 5 mg. or to 10 mg. However, at times 100 per cent relief was obtained with a 5 mg. dose. If the doses given were not large enough, the treatment was changed to hexestrol or stilbestrol. These drugs were cheaper than benzestrol and their use was practical when a very strong estrogenic effect was required.

Objective proof of the estrogenic potency of benzestrol was demonstrated by vaginal smear tests showing an improvement in cell cornification, by an increase in vaginal moisture, by greater breast fullness and by the production or inhibition of uterine bleeding.

Although not a part of this study, it was found that several patients who were unable to take .5 mg. to 1 mg. of stilbestrol because of severe nausea could take 5 mg. to 15 mg. of benzestrol without nausea. Some patients were nauseated by therapeutic doses of stilbestrol, hexestrol, and benzestrol administered separately, but others were nauseated by only one or two of these substances. Of the three, stilbestrol was the most likely to cause nausea, whereas benzestrol and hexestrol were much less likely to cause it.[5,8]

SUMMARY

Benzestrol satisfactorily relieved women of the symptoms due to estrogen deficiency. In addition objective proof was obtained of its estrogenic potency. The amount necessary to produce a good therapeutic effect varied from 5 mg. to 15 mg. daily. A few mild toxic reactions occurred with the use of benzestrol, but in this respect it was preferred to diethylstilbestrol dipropionate, which caused a much higher percentage of reactions.

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REFERENCES

1. Blanchard, E. W., and Stebbins, R. B.: Effects of oral and parenteral administration of new synthetic estrogen, benzestrol, in rat, Endocrinology, 36:297-304 (May), 1945.
2. Blanchard, E. W., Stuart, A. H., and Tallman, R. C.: Studies on a new series of synthetic estrogenic substances, Endocrinology, 32:307 (April), 1943.
3. Freed, S. C., Eisin, W. M., and Greenhill, J. P.: Assay in the human female of synthetic estrogen, 118B, J. Clin. Endocrinology, 2:213 (April), 1942.
4. Greenhill, J. P.: The use and potency of synthetic estrogens, Am. J. Obst. & Gynec., 44:475 (Sept.), 1942.
5. Harding, F. E.: Diethylstilbestrol diproprionate; a clinical comparison with estrone and estradiol benzoate, West. J. Surg., Obst. & Gynec., 50:207 (April), 1942.
6. Harding, F. E.: The oral treatment of ovarian deficiency with conjugated estrogens-equine, West. J. Surg., Obst. & Gynec., 52:31 (Jan.), 1944.
7. Harding, F. E.: Oral substitution therapy with ethinyl estradiol and alpha-estradiol, Am. J. Obst. & Gynec., 48:181 (Aug.), 1944.
8. Harding, F. E.: The oral use of hexestrol for estrogen deficiency, Am. J. Obst. & Gynec., 51:660 (May), 1946.
9. Harding, F. E.: Some allergic reactions to parenteral therapy, Med. Rec., 152:448 (Dec.), 1940.
10. Harding, F. E., and Fraser, A. V.: Use of testosterone pellets in the male hypogonad, Urol. & Cutan. Rev., 46:575 (Sept.), 1942.
11. Hufford, A. R.: The synthetic estrogen octofollin (in oil), J.A.M.A., 123:259 (Oct.), 1943.
12. Jaeger, A. S.: Use of octofollin in conditions of estrogen deficiencies and in gonorrheal vulvovaginitis, J. Indiana M. A., 37:117-119 (Mar.), 1944.
13. Jaeger, A. S., Moenning, W. P., and Bowman, G. W.: Gonorrheal vaginitis, Urol. & Cutan. Rev., 47:81 (Feb.), 1943.
14. Murphy, J. A.: On the employment of octofollin for the relief of menopausal symptoms, for the suppression of lactation, and in gonorrheal vaginitis, Am. J. Obst. & Gynec., 46:146 (July), 1943.
15. Roberts, H. K., Loeffel, E., and MacBryde, C. M.: Octofollin a new synthetic estrogen, J.A.M.A., 123:261 (Oct.), 1943.
16. Stebbins, R. B., and Blanchard, E. W.: Effects of new synthetic estrogen, benzestrol, upon hematopoietic system in rat, Endocinology, 36:305-312 (May), 1945.
17. Talisman, M. R.: A clinical and laboratory study of the synthetic estrogenic substance, octofollin, Am. J. Obst. & Gynec., 46:534 (Oct.), 1943.
18. Taylor, S. G., III, and Thompson, W. O.: Experiences with a new synthetic estrogen for oral administration, Endocrinology, 30:S1042 (June), 1942.

"WARTS"

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THE lowly wart is one of the skin diseases most frequently observed in general practice. It is especially common among young patients. Of 4,533 students who were seen in my clinic during one academic year at the University of California Infirmary, 540 came because of warts. About the same ratio holds true in private practice.

Although there is a correct, though vague, idea among laymen that warts are contagious it is not generally known that they are caused by a specific infection, viral in nature. If warts are curetted off, ground up in saline solution and this solution is passed through a Berkfeld filter, the filtrate will produce warts at the site of inoculation into the skin of human volunteers or experimental animals. The incubation period is quite variable but nearly always quite long. I have shown elsewhere that as long a period as eighteen months may elapse between inoculation and the appearance of the wart. Others have stated that this interval may be as long as several years. This fact has great bearing upon the cure of a crop of warts in an individual. For after the physician has thoroughly and successfully destroyed every trace of visible warts he cannot assure the patient that others have not already been "planted" and may not develop several months later. This point should be carefully explained to the patient. I forestall criticism by quoting the quite accurate, but easily understood remark of one of my patients. He said, "Doc, warts are just like weeds in a garden. You pull them all out and think you have them all, but pretty soon there is another crop. All you can do is keep on weeding until you get them all."

One need say little in this discussion concerning the pathology of warts. Occasionally they have been mistaken microscopically for low grade squamous cell epitheliomas, but this error is infrequent. True warts, verruca vulgaris, never become malignant. It is true that so-called "senile warts" of the face, and "seborrheic warts" of the trunk may and do degenerate into malignancies, but these are not warts at all but rather they are varieties of keratoses. Patients are much happier after having been reassured on this point.

The different types of warts are merely variants on the skin of identical or at least similar virus infections. Certain of them may differ from others because of local environment. Thus, the huge cauliflower masses of condyloma acuminatum seen around the anus, around the vulva, beneath pendulous breasts or underneath the foreskin are nothing but masses of common warts growing luxuriantly in areas of dampness, darkness and friction. Likewise, the wart on the sole of the foot, even though it may be called papilloma or plantar wart, is a common wart which, being unable to grow outward because of pressure, is forced to grow deep into the skin where it produces painful pressure symptoms. Beard warts are generally tiny and multiple; tiny, because of being shaved off daily, and multiple because of being inoculated over the face by minute razor cuts. But still they are basically the same process as the large wart on the thumb. There is one special variety that is somewhat different and interesting—the plane, flat or juvenile wart. This type generally occurs on the face or hands in large numbers, is always small—about one to three millimeters in diameter—never becomes large and is a flat-topped, elevated, plateau-like papule. But even with its marked variation from the ordinary wart in appearance, investigators have found that the virus is similar or identical.

Ease of curability of warts varies from the facility with which Tom Sawyer cured his with stump water to the difficult cases in which removal of areas of skin followed by grafting is necessary. Although one hesitates to say so, psychotherapy seems occasionally, but rarely in my experience, to cure warts. Bruno Bloch wrote a rather long thesis describing his cures by suggestion. Upon this basis rest the cures by various "negro mammy" methods of treatment. It is also possible that some of our more modern treatments such as injections of bismuth or neoarsphenamine may depend upon suggestion. Allington demonstrated that injections of colored water cured just as many patients in his series as did sulpharsphenamine. And although Lurie has reported almost perfect results following bismuth injections, my own experience is that the number of cures by this method rather closely paralleled the cures from injections of colored water. In brief, my experience with these agents has been so disappointing that I reserve them for cases in which warts occur in such huge numbers as to make radical destruction impractical.

Common warts on the glabrous skin are cured with greatest certainty by destructive measures. My personal preference is for electrodesiccation. After anesthesia with procaine, the wart is desiccated until it turns white. The end point is when a certain sudden incandescence occurs beneath the wart. Then with manicure scissors the wart is freed from the normal skin around it, after which the base is thoroughly curetted. If electrodesiccation is not available, a fine tipped actual cautery can be used. If neither is available one can free the wart with fine scissors, curette the base thoroughly and paint the dry base with pure phenol. With any of these methods some scarring is apt to result, of which the patient should be warned in advance. If it is desirable to avoid all scarring and an open wound, x-ray or radium may be used. Both of these are excellent treatments for warts even though the 72 per cent rate of cure reported by the Mayo Clinic following their use is definitely lower than that obtained by destructive measures.

Plantar warts when large or multiple present an exceptionally difficult problem. If they are small, say below five millimeters in diameter, destructive methods such as those just mentioned are excellent. But if the warts are of greater size the wounds which result from destruction are so painful and so slow in healing as to make destructive measures inadvisable. I hesitate to produce a scar on the sole of the foot over pressure areas, weight bearing areas, because such a scar may be permanently painful. It is on plantar warts that radiation therapy—either x-ray or radium—works best. If it should fail, one can always resort to desiccation, the cautery or excision.

Montgomery of New York has recently reported good results from a modernization of an old-fashioned treatment of plantar warts. First he pares the wart down to the bleeding capillary points. Then he paints the denuded base with full strength bichloracetic acid. When this has dried and bleeding has ceased he applies 40 per cent salicylic acid plaster to the area, leaving it on until the next visit to the office when the treatment is repeated.

There is a special variety of plantar warts in which there is a solid plaque of small warts existing side by side in a mosaic pattern. These masses of so-called "mosaic warts" are often two to three centimeters in diameter and are particularly difficult to treat. Because of the size of the resulting wound they should not be treated by electrodesiccation or the cautery; nor should x-ray or radium be used because of the danger of radiodermatitis. They should be treated conservatively by the paring-salicylic acid method mentioned in the preceding paragraph or by another good conservative method which consists of daily paring and soaking of the pared area in a puddle of 4 per cent formaldehyde in water.

Condyloma acuminatum — masses of warts in moist areas such as around the vulva, the anus, the foreskin or beneath pendulous breasts—yield spectacularly well to simple applications of 25 per cent resin of podophyllin in olive oil. This treatment is almost specific. The mixture is applied to the warty masses about once a week. As a rule the warts disappear completely after two to four of such treatments.

Beard warts yield nicely to destruction with a fine tipped electrocautery, but recurrences are frequent. I know of no local application or antiseptic which tends to prevent such relapses.

Plane, flat, or juvenile warts seem to respond sometimes to the oral administration of Fowler's solution or protiodide of mercury. With such oral medication one may combine daily painting of each flat wart with tincture of iodine on a toothpick. Occasionally, if they occur in great numbers on the face, a mild face peeling with 10 to 15 per cent salicylic acid ointment applied once daily is the most practical treatment. Unfiltered x-ray therapy is also valuable.

One of the newer ideas in treating warts is that of Biberstein. He prepares a suspension made of warts ground up in saline and inactivated. This is injected at intervals intradermally. Not only is this method not fully proved, but the source of supply is uncertain. Another new idea, quite practical, consists of blocking off the blood supply of each wart by injecting beneath its base a very small quantity of a sclerosing solution such as 50 per cent glucose.

In following any method of treatment of warts, one should remember that they are benign growths, that they are rarely harmful and that they may spontaneously disappear. Therefore, any treatment which might do the patient harm should be avoided.

3115 Webster Street.

Overlooked Foreign Body in the Tracheobronchial Tree

Case Report

Max E. Childress, M.D., Paul C. Samson, M.D., and David J. Dugan, M.D., *French Camp*

THE presentation of this case, with a brief description of its complications and management, represents an effort to produce awareness of the aspirated foreign body as a cause of broncho-pulmonary suppuration in children.

CASE HISTORY

A six year old female was admitted to the San Joaquin General Hospital on March 15, 1946, with the complaints of persisting non-productive cough and intermittent low grade fever for the past four years. During this period, she had been examined by several physicians who had made the repeated diagnosis of an upper respiratory infection. No history of foreign body aspiration had been obtained, and roentgen examination had not been performed.

The child, who was fairly well nourished, suffered from a frequent cough which gave one the impression of moist viscid bronchial secretions, yet she produced no sputum. There were barely perceptible inspiratory lag, dullness to percussion and diminished breath sounds at the right lung base. Clubbing of the digits was noted.

Hemoglobin was 70 per cent, erythrocytes numbered 3,800,000 and leukocytes 13,400. A roentgen film of the chest (Fig. 1) was interpreted as follows: "There is a metallic foreign body (nail) measuring approximately 3 cm. in length lying in the right stem bronchus and extending somewhat into the trachea. There is an irregular calcification at the distal end, which may be around the head. Irregular patches of pneumonia are noted involving the major portion of the right lower lobe with highlights in situ suggesting an underlying bronchiectasis."

On March 16 the shaft of a 1½-inch nail was extracted from the right main stem bronchus, aspiration of a large amount of foul purulent discharge was carried out and a marked amount of granulations just below the upper lobar bronchial meatus was noted. The head of the nail was not seen. From March 24 to September 23, 1946, three bronchoscopies were performed. On June 8, fine, black mineral-appearing granules were removed from the right stem bronchus—undoubtedly the disintegrated portions of the nail head. These granules caused the shadows originally interpreted as irregular calcifications (Fig. 2). Bronchograms were made on August 8. There was a bronchostenosis just proximal to the middle lobar orifice with bronchiectasis and atelectasis of the right middle and lower lobes.

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Figure 1.—Nail in right stem bronchus showing disintegrated portions of head and secondary pulmonary changes of right middle and lower lobes after four years.



Figure 2.—Postbronchoscopic removal of nail shaft and head revealing residual right basal atelectasis.

Following each bronchoscopic drainage, the child's condition improved temporarily, then gradually deteriorated as noted by loss of appetite, lethargy, foul odor to breath, increased cough, wheezing, low grade fever and anemia. Prior to operation a transfusion of whole blood raised the hemoglobin from 60 to 90 per cent. The patient was placed on frequent postural drainages and penicillin was administered by the intramuscular and aerosol routes.

Lobectomy was performed September 28 by one of us (P.C.S.) with endotracheal anesthesia of cyclopropane and ether. Because of excessive suppuration, immediate preoperative aspiration bronchoscopy was executed. The pleural cavity was surprisingly free of adhesions. The stem bronchus was immediately approached posteriorly, dissected free, and clamped just distal to the upper lobar orifice to prevent manipulative spill-over of purulent secretions into the contra-lateral lung. After the vessels had been secured, the middle and lower lobes were amputated and the bronchus was closed with a single row of interrupted fine silk sutures. The stump was then pleuralized. Fifty thousand units of penicillin were left in the pleural space. An upper anterior and a lower posterior intercostal catheter were inserted for connection to water-seal drainage bottles.

During the immediate postoperative period the patient was aided in evacuating of the tracheobronchial secretions. Catheter aspiration of the hypopharynx to provoke the cough reflex and postural drainage were employed at frequent regular intervals to attain this result. The character of the sputum changed from blood streaked to "prune juice" on the sixth postoperative day and ceased on the eighth day. On the 19th day the patient was discharged completely free

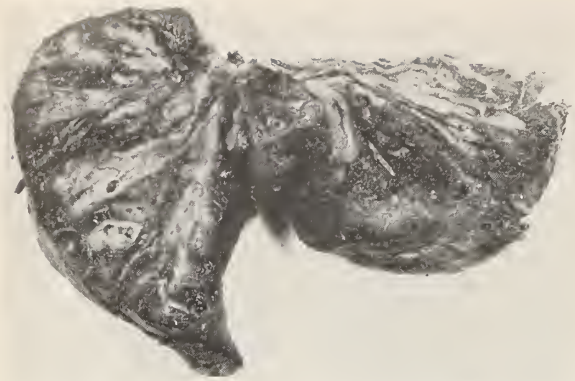


Figure 3.—Sectioned operative specimen, the middle lobe is to the right. (See text.)

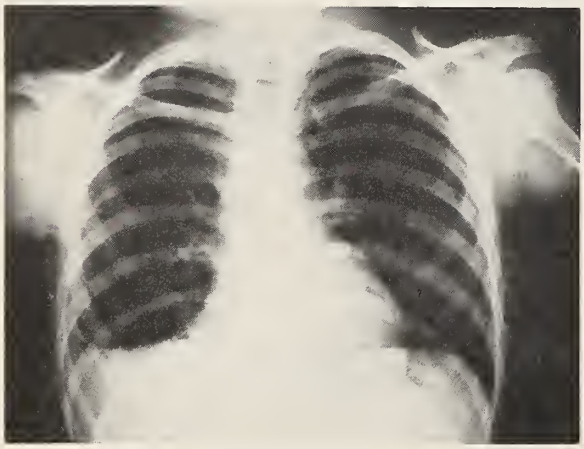


Figure 4.—One month postoperatively. Note that remaining right upper lobe has completely filled the right hemithorax and that the resected 7th rib has already partially regenerated.

from the previously listed physical signs and symptoms.

Examination of the operative specimen revealed partial stenosis of the stem bronchus, and both lobes contained bronchiectatic abscesses. The lower lobe was completely atelectatic and the middle lobe partially so. Lymph node hyperplasia was marked (Fig. 4).

COMMENT

A retrospective analysis of any case is often illuminating. The development of a lesion becomes obvious and logical—at times to the point of embarrassment. Therapeutic decisions can be made with ease from hindsight, but unfortunately they cannot be applied. For instance, the history indicates that this child aspiratcd a nail at the age of two without the knowledge of either parent. Thus, the ideal time for bronchoscopic removal was missed. As the result of an inadequate history and the failure to make proper roentgen studies, she carried the nail for four years and developed a very nearly fatal broncho-pulmonary suppuration.

Chevalier Jackson[1] in an analysis of over 200 cases of foreign body states that "the failure to make the diagnosis is due not so often to the inability to make it as to the failure to consider it as one of the diagnostic possibilities." He further stresses the *symptomless interval* as the chief cause of overlooked foreign bodies. There is usually an interval between the initial symptoms and the onset of the later symptoms due to secondary changes in the lung. The interval may be a few hours in the case of peanut kernels, a few months in the case of foreign bodies composed of metals and glass if they are not obstructive, and may extend to even a few years in the case of pins and similar slender metallic objects.

It is presumed that the parents of this child shed their concern for a false sense of security, after the initial symptoms subsided, thus allowing the nail to produce the secondary pulmonary changes described. Thereafter, various physicians failed to consider foreign body as a diagnostic possibility to account for the patient's illness.

In children, the physician should always consider a foreign body of the tracheobronchial tree when cough with moderate fever persists, or when rhonchi of an unexplained nature are encountered—"All is not asthma that wheezes."[1] The more dramatic physical signs of respiratory distress, which result from complete occlusion of the larger bronchi, usually provoke a searching investigation so that the foreign body becomcs apparent. If, after the usual diagnostic methods, including roentgenogram, fail to reveal a suspected foreign body, the tracheobronchial tree should be subjected to bronchoscopic exploration. The risk of bronchoscopy is negligible when compared to the complications of a retained foreign body.

SUMMARY

1. A case presentation has been made emphasizing the complications of unsuspected foreign body in the tracheobronchial tree.

2. Brief comment has been made on the danger of overlooked intrabronchial foreign bodies in children, stressing the symptomless interval, the importance of considering foreign body in the differential diagnosis and the value of bronchoscopic exploration in doubtful cases.

REFERENCE

1. Jackson, Chevalier, and Chevalier, L.: Bronchoscopy esophagoscopy and gastroscopy, Philadelphia, W. B. Saunders Co., 154-156, 1934.

URETERAL REFLUX

JAMES STEINBERG, M.D., *Los Angeles*

URETERAL reflux presents aspects that have led to a wide divergence of opinion among observers of this phenomenon. Uretero-vesical valve disease and bladder neck obstruction, or a combination of both appear to be among the principal controversial etiological factors.

The case here cited emphasizes the importance of ureteral reflux in differential diagnosis of right lower abdominal quadrant pain, as well as pointing out its connection with bladder neck obstruction.

CASE REPORT

A female, age 14, gave a history of repeated attacks of unexplained fever, somewhat similar to the present illness, since birth.

The present attack gave all the classical symptoms and findings of acute appendicitis—right lower quadrant pain, fever, nausea, vomiting, rebound tenderness and leukocytosis —but with a negative urine. The patient was operated upon and the appendix removed.

Postoperatively, the right lower quadrant pain continued accompanied by difficulty in voiding requiring catheterization. There were chills and fever of 104 degrees and findings in the urine of pus with gram negative bacilli and gram positive cocci in pairs and chains. This was treated with an in-dwelling catheter and medication which resulted in disappearance of the symptoms.

After two such repeated attacks of pyelocystitis with a residual bladder urine of 250 cc. during which the pain shifted from the right to the left lower abdominal quadrant, the patient was cystoscoped. The bladder wall was highly inflamed and trabeculated. Both uretero-vesical orifices showed golf cup depressions. The bladder neck gave the appearance of a general contracture with a V notch anteriorly. A cystogram showed bilateral ureteral reflux.

There was a bilateral pyelitis of staphylococcic and streptococcic origin. The ureters and pelves showed no abnormalities in the x-ray films, with the exception of blunting of the minor calices.

Operation with bladder neck resection was done and the obstruction to the flow of urine through the bladder neck was removed. This was followed by recovery with complete emptying of the bladder, disappearance of the ureteral reflux and disappearance of the infection.

Pathology: The tissue removed from the bladder neck weighed four grams and microscopically showed hypertrophy of the bladder, chronic cystitis with extensive fibrosis and organizing granulation tissue.

This case has been observed for the past year. During that time there has been no residual bladder urine, no fever, no pain and the urine has remained clear of infection except for two recurrences of pus and colon bacilli in the urine. Each of these recurrences was cleared up in a few days by palliative treatment with administration of sulamyd. No residual urine in the bladder nor symptoms of ureteral reflux appeared during these two attacks of pyuria.

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Read before the Section on Urology at the 75th Annual Session of the California Medical Association, Los Angeles, May 7-10, 1946.

REVIEW OF LITERATURE

Review of the literature on ureteral reflux gives evidence of widespread interest in it as well as in the many diversified opinions that have arisen in the course of study on the experimental animal as well as the human subject. The following abstracts of previous reports briefly crystallize this situation.

Bladder regurgitation in the animal as shown by Auer and Seagar[1] is brought about through the rigidity and patence of an experimentally inflamed uretero-vesical valve in the presence of a low intravesical pressure and further it has been shown that the reflux is stopped by increasing the intravesical pressure. In explanation of this observation, it may be deduced that the oblique intramural portion of the ureter renders it more susceptible to closure by pressure on the bladder wall by the bladder contents.

Graves and Davidoff[3] have demonstrated ureteral reflux in normal bladders as frequently as in abnormal bladders and ureters. The chief factor found was that good bladder tone was indispensable to the production of ureteral reflux.

Bumpus[2] in a large series of cases showed that in the human subject the principal causative factor lies in the diseased inflamed rigid uretero-vesical valve and ureter, and that regurgitation is only occasionally affected by lower urinary tract obstruction in the adult. Graves and Davidoff[4] on the other hand demonstrate bladder regurgitation in the presence of an actively contracting bladder, most particularly in cases with vesical neck obstruction.

Prather[6] concludes that "discrepancies are probably due to differences in length and musculature and degree of damage from the disease of the uretero-vesical valve in animals as well as in the human subject resulting in a greater incidence of ureteral reflux in shorter and more poorly developed musculature of the diseased uretero-vesical valve."

DISCUSSION

The case under discussion emphasizes the importance of ureteral reflux in the differential diagnosis of right lower abdominal quadrant pain. Three significant preoperative observations, occurring together as they did in this instance, should direct attention to the urinary tract for investigation as a possible cause of the clinical symptoms.

1. The history of previous similar attacks of unexplained fever.

2. The shifting of pain from the right to the left lower abdominal quadrant.

3. The presence of a large, enormously distended bladder with residual urine, even though this urine was not infected. It may also be noted in this connection that the absence of infection in the urine in

cases of idiopathic fever does not of itself preclude the possibility of urinary tract disease.

As to the mechanism of production of the disease in this case, it may be noted that the increased intravesical pressure, induced by incomplete emptying of the bladder as a result of the bladder neck obstruction, probably produced the two golf cup depressions at the uretero-vesical orifices, simulating the mechanism of production of a beginning diverticulous orifice. Logically the continuation of this pressure of the bladder contents directed against the inflamed weakened uretero-vesical valves also caused the ureteral reflux.

A ureter entering the bladder at a right angle would not be closed as readily as if it ran in an oblique direction, and would therefore be more susceptible to regurgitation. This is borne out in diagonal ureteral transplantation into the bladder in contradistinction to the shorter right angle implantation, for in the latter case there is a greater tendency to ureteral reflux, as shown by the experiments of Graves and Davidoff.[5]

Further evidence that the obstruction at the neck of the bladder was a definite factor in the production of the bladder regurgitation in this case may be deduced from the clinical course of the disease. Each time a retention catheter was used continuously to empty the bladder of its contents and thereby relieve the intravesical pressure, the symptoms subsided. Each time the catheter was removed, the symptoms of ureteral reflux recurred.

Since permanent removal of the bladder neck obstruction by operation, the symptoms of reflux have not reappeared despite the fact that there has been an occasional recurrence of the urinary infection with cystoscopic evidence of moderately inflamed and weakened uretero-vesical valves.

The treatment indicated as a result of these findings in ureteral reflux with bladder neck obstruction is obviously removal of the obstructive factor by temporarily using an in-dwelling catheter. If the symptoms are thus relieved, then permanent removal of the obstruction should be done to cure the ureteral reflux.

SUMMARY AND CONCLUSIONS

1. A case of ureteral reflux has been reported in which bladder neck obstruction appears to have caused increase of intravesical pressure which in turn produced ureteral regurgitation by the continued action of the bladder contents on the inflamed uretero-vesical valves.

2. The importance of ureteral reflux in differential diagnosis of right lower abdominal quadrant pain is pointed out.

3. Urinary tract study in recurrent attacks of unexplained fever may prove to be of considerable value.

4. Given a case of ureteral reflux with the supporting facts of the case reported, it is reasonable to assume that the bladder neck obstruction is the pivotal point of the reflux and that permanent removal of the obstruction is the logical procedure to obtain a cure.

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DISCUSSION BY JAMES L. BRAY, M.D.

Dr. Steinberg is to be congratulated in bringing to us this very interesting subject and demonstrating a case of ureteral reflux secondary to bladder neck obstruction.

While there is considerable disagreement on the mechanism of ureteral regurgitation, it has been produced by investigators under different circumstances and most of the investigators seem to agree that some abnormality of the urinary tract is necessary before ureteral reflux may occur.

Apparently, nature did not intend for the bladder contents to regurgitate to the kidney and took precautions to prevent this as a protection to the kidney. That it does sometimes occur seems to bear out the theory that some defect is present, even though we may not recognize it.

If ureteral reflux could occur easily in normal individuals, one would expect to find ruptured kidneys when the bladder is ruptured by powerful external blows. I do not recall of having heard of such a case, although it does seem possible if the ureteral vesical valves were inefficient.

Dr. Steinberg has pointed out a case of ureteral reflux secondary to vesical neck obstruction and the relief of this condition by correcting the constriction of the bladder neck. This case clearly demonstrates the advisability of having urologic study before abdominal surgery is carried out. It also suggests to me that cystograms should be done in cases of renal pain which is not satisfactorily explained by pyelograms. We may be overlooking ureteral reflux.

REFERENCES

1. Auer, J., and Seager, L. D.: Experimental local bladder edema causing urine reflux into ureter and kidney, J. Expr. Med., 66:741 (Dec.), 1937.

2. Bumpus, H. C., Jr.: Urinary reflux, Jour. Urology, 12:341-346 (Oct.), 1924.

3. Graves, R. C., and Davidoff, T. M.: Studies on ureter and bladder, with especial reference to regurgitation of vesical contents, J. Urology, 10:185-231 (Sept.), 1923.

4. Graves, R. C., and Davidoff, T. M.: Studies on bladder and ureter with special reference to regurgitation of vesical contents; regurgitation as observed in cats and dogs, J. Urology, 14:1-17 (July), 1925.

5. Graves, R. C., and Davidoff, T. M.: Jour. Urol., 109-185, 1923.

6. Prather, G. C.: Vesico-ureteral reflux; report of cases cured by operation, J. Urology, 52:437-447 (Nov.), 1944.

LEUKONYCHIA*

Douglass W. Montgomery, M.D.

THE white spots that so frequently occur on the nails, especially in young women, have a number of names, many of them frivolous, such as "kisses," "wishes," or "gift spots." Like most strange happenings they have their folklore also, and in Bavaria, according to Heller,[2,3] it is believed that the person having them shall live as many years as there are spots on the nails, while on the Rhine the person having them is held to be a liar. That the names should be frivolous is often quite fitting, as frequently the spots are of trifling importance. This, however, is far from saying that they are of no account whatever, as nothing pertaining to the human being is that, and, furthermore, this symptom, under certain circumstances, may have a grave significance.

Jonathan Hutchinson once aptly said: "It is convenient to think of a nail as a gigantic flattened hair." The nail plate corresponds to the hair, the slot out of which it springs to the hair follicle, and the matrix from which the nail grows is analogous to the hair papilla. The matrix, as being an organ of growth, is composed of very soft cells, and in these cells there are scattered minute particles of air, ordinarily invisible. When, however, the root of the nail is rudely pressed upon, as is often the case in pressing back the posterior nail-fold in manicuring, the injury causes the cells to imbibe an unusual quantity of air, so forming the white spots and stripes. That these spots are air can be demonstrated by dark-field illumination of sections of the nail in which the air-filled spaces show white against the darker, normally dense nail substance.[1] Also, if the surface of the nail, which in leukonychia is smooth, is cleared off with a file one finds that the white spot is composed of cells which are crumbly, soft and infiltrated with minute air bubbles which, by refraction, give the white cloudy appearance. This cloudiness is often marked, and Sabouraud compares it to the stratified clouds seen in the sky on a summer evening. Heidingsfeld of Cincinnati, therefore, was perfectly correct in stressing this kind of injury in the production of this symptom, and it accounts for its frequent occurrence in young girls who are so interested in nails as ornaments.

Leukonychia of the nails of the toes is not nearly so frequently observed as of the fingers. They, of course, are not so exposed to view, and they are also not so exposed to the peculiar kind of injury incident to manicuring. The injury of manicuring is directly over the lunula, and therefore directly over the matrix where, as was said before, leukonychia arises.

There are other, more important causes than local injury for the production of both transverse furrows and white streaks and dots across the nails. They may occur as one of the results of severe fevers, the constitutional turmoil evidently so affecting the matrix as to give rise to this expression of abnormal growth. This may be of great importance forensically as fixing the date of a previous severe illness. It is known that the nail grows at the rate of about 0.1 millimeter a day, and that it takes approximately four months for it to progress from its base at the posterior nail-fold to the white lines of its free terminal border. Of course some allowance may be made for retarded growth during the weakness of convalescence, and also there is a difference in the rate of growth in the young and in the aged, but nevertheless this is the average.

White stripes or cross ridges have been observed corresponding to severe attacks of typhoid or typhus or other severe fevers, and one case has been reported in which each attack of relapsing fever was followed by a leukonychia stripe, definitely showing the connection between the attack and the occurrence of the lesion on the nails.[2]

At one time I had under my care a man, aged 30, who had just recovered from an attack of acute articular rheumatism, with a cardiac residue. When he came to me he was still suffering from excessive sweating, and the nail of each finger and thumb had a band of leukonychia across its middle, corresponding in time with his previous illness. Posterior to each band there was a transverse ridge indicating a profounder affection of the nail matrix at the height of his illness. Either stripes or ridges are of the same nature, the ridges of course indicating a profounder disturbance of the matrix.

NERVE LESIONS AS CAUSING WHITE STRIPES ON THE NAILS

Besides leukonychia due to direct local injury and that due to the severe infectious fevers, there is that due to nerve lesions. In an organ as richly supplied with nerves as the nail, it is not surprising that its germinative body, the matrix, should be so affected in the multiple neuritis of alcohol or of arsenic as to cause leukonychia. C. T. Aldrich of Cleveland has reported three cases of leukonychia striata arsenicalis. One of these patients first got drunk and then tried to commit suicide with arsenic, and recovered from both, but with white stripes on his nails to remind him of his adventures.

The finger nails are very sensitive to pain, touch and pressure, and the blood vessels of the finger tips and posterior nail-folds are exceedingly mobile and liable to congestion, showing how sensitive the vasomotor nerves of this region are. A remark of Louis Brocq that many of his leukonychia patients had blue finger tips indicates how close the association may be between the vasomotor nerves and these white

*Editor's Note: This delightful little classic was found in the editor's files. Dr. Montgomery died December 20, 1941. For many of his old friends, the reading of this article will bring pleasant memories of a witty, thoughtful man.

spots on the nails.[3] Anyone may demonstrate upon himself what delicate organs of touch nails are, and the old Latin idiom, "ad unguem," shows this admirably. It means the minutest exactitude and finish, and derives from the sculptors' practice of running the thumbnail along the marble they were working on to detect any inequalities. As for pain, it was at one time customary to drive a wedge under the nails to elicit information from a recalcitrant witness.

In speaking of affections of the nerves as causing leukonychia one may mention the neurotic. There are patients, principally women, suffering with all sorts of nervous symptoms. They wander from physician to physician, seeking health and finding none. One such was a woman, 30 years of age, the subject of the photograph (Figure 1). As a girl in the Sacramento Valley she had frequently had malaria. She was a constant sufferer from constipation, acne and, from time to time, severe attacks of herpes simplex of the lips. She frequently had leukonychia. At one time I was able to count seven distinct cross stripes on the left middle and little fingers and seven cross



Figure 1

stripes either as riffles or as white stripes on each thumb. She ended her life at 40 years of age by falling from the sixth story window of the hotel in which she was residing.

CONSTANTLY RECURRING LEUKONYCHIA OF OBSCURE ORIGIN

Besides those in the neurotic, there are other instances of striped leukonychia, the origin of which is not so clear, yet most interesting for the dermatologist. There is the constantly recurring history of chronic constipation, indigestion, acne and white stripes on the nails. That in these cases there is often an exacerbation of the acne at each menstrual period is an old and universally recognized clinical fact. It may well be that each leukonychia stripe may correspond with a menstrual period.

In practice one only occasionally notes such a symptom as white spots on the nails, so that one's histories only represent isolated examples, but a collection of cases throughout the years does give one a realization of the disparity between its occurrence in males and females—21 women and four men.

Furthermore, in the practice of a dermatologist leukonychia would always be noted as occurring with some other disease of the skin, as people only very rarely consult one on account of white marks on the nails alone. Some of the coincidences, however, are interesting. For instance, four out of 25 patients had hyperidrosis, which frequently is a vasomotor symptom, and which shows itself particularly on the palms and soles. One patient with psoriasis had very dry hands, but of course both undue dryness and undue moisture are deviations from the normal of the same sets of glands, and therefore closely related.

Of particular interest was the case of a young man who had been an athlete and had changed to a comparatively secondary occupation. He was decidedly overnourished, had a florid face and red congested hands, and suffered from indigestion and spells of constipation. He had a widely extended erythematous eczema, hyperidrosis of the palms, and a vesicular eruption between his fingers and of his feet. No fungus was found, although carefully searched for. He recently had had pain over the site of the appendix. If one could have laid open his alimentary canal to the light of day, it undoubtedly would have presented a wonderful sight.

One of my patients had psoriasis of the palms and volar surfaces of the fingers; another had dry rough hands associated with psoriasis; another had a patch on the back of one hand resembling psoriasis. A woman, severely afflicted with eczema, including the hands, had a constant peeling of the skin below the free border of the nails. A man had a vesicular eczema of the right foot and both palms. No fungus was found, so probably it was a true eczema. A woman had vitiligo of the backs of the digits, spreading up the forearms, and another had chronic paronychia and drumstick-fingers. Some of these cases are interesting because of the coincidence of the white stripes and of catarrhal or other inflammation of the hands, as they both involve abnormal blood flow, and therefore abnormal nutrition of the same locality.

Excluding those cases due to traumatism, as in young girls in manicuring their nails, and also excluding those cases that one can say occur accidentally due to acute febrile diseases and to poisons such as arsenic and alcohol, and taking into consideration only those cases in which the white stripes recur persistently, leukonychia is a symptom that has to be regarded seriously and one which indicates a more or less grave, persistent state of ill health. What this condition may be, may not be precisely demonstrable, but it is there and Sabouraud is the only author I have met with who accentuates this view.[4]

REFERENCES

1. Brocq, Louis: Precis-Atlas de Practique Dermatologique, Paris, France, p. 1076, 1921.

2. Heller, Julius: Die krankheiten der nagel; Handbuch d. Hautu-Geschlechtskrankheiten, von J. Jadassohn, Berlin, s. 125, 1927.

3. Quoted by Julius Heller: Loc. cit., s. 127.

4. Sabouraud, R.: Valeur prognostique et symptomatique des "Ongles Marbrés," Entretiens Dermatologiques, Masson et Cie, Paris, France, Vol. I, serie nouv. p. 191, 1922.

Does Milk "Make Mucus"?*

Ray M. Moose, M.D., *San Bernardino*

WHEN dietary instructions are given patients, the physician is not infrequently faced with this statement: "Doctor, I haven't been drinking milk because it makes mucus in my throat."

A few years ago, to test the extent of this feeling among patients I asked 200 consecutive adult patients this question: "Does milk make mucus for you?" The answer was "Yes" in 25 per cent of the cases.

The belief is widespread that milk is the cause of the disturbing postnasal mucus. Is there any factual basis for such a belief? Are patients mistaken?

As is well known, a thin layer of mucus is normally present as a protective film for the nose and throat, and causes no sensation. However, when the mucus becomes excessive or muco-pus develops, then the patient is annoyed.

Also, as has been pointed out by Proetz,[2] the patient complains of discharge in the nasopharynx if the mucus becomes abnormally viscous, abnormally fluid, irritating, odorous, or obstructive.

Proetz listed 18 different agents he considered capable of causing the "postnasal drip" but did not mention milk as a possible factor. Yet milk is what many patients believe is responsible, and consequently many of them omit milk from the diet.

Cultists and a few reputable physicians take milk away from patients because they, too, believe that milk "makes mucus." Milk should not be taken from patients without good reason because, in the words of Lester:[1] "Milk is the most important of all foods. . . . The amount of milk consumed by the adult has an important bearing on the health of the community and on its wealth."

It seemed important, therefore, to make nose and throat examinations of patients drinking milk and those not doing so to see which group had the most mucus in the throats; and at the same time to obtain statements from the patients of each group as to the presence or absence of disturbance from postnasal mucus.

PROCEDURE FOR COLLECTING DATA

Histories were obtained from 1047 consecutive adult eye, ear, nose, and throat patients observed during the past three years.

Information was recorded at the first visit relative to the number of glasses of milk consumed each week, whether the patient was or was not ordinarily bothered with mucus in the throat, or had a cold, sore throat, sinus trouble, or history of allergic disturbances. Of the 1047 patients, 400 were excluded because of active upper respiratory disease. This left 647 patients with normal appearing noses and throats from whom the data were obtained, largely patients with eye disease.

* Data from 647 eye, ear, nose and throat patients.

Table 1.—*Reports from 647 Patients as to Complaints of Postnasal Mucus*

Milk, glasses consumed per week	Patients in group	Complaint of mucus Cases		Not bothered with mucus Cases	
		Number	Per Cent	Number	Per Cent
0-5	310	141	45	169	54
6-9	94	47	50	47	50
10 or more	337	155	46	182	54

The 647 patients were divided into three groups according to their habits of drinking milk; for each group the individual complaint of mucus is summarized in Table 1.

It is thus evident that the percentage of persons who complain of postnasal mucus is practically the same among those who drink milk as among those who do not.

It was further observed that of the scores of non-milk drinking patients who began to drink milk, none made a voluntary complaint of mucus, and there was no tendency for more mucus to be found in their throats on examination.

Among the 647 patients listed in Table 1 are 106 patients who gave a history of having had hives, hay fever or asthma. Table 2 lists the data from the records of this group and shows a similarity to the data in Table 1. The chief difference is that in the allergic group a slightly higher percentage of those who did not drink milk complained of mucus in the throat. (In this report we are dealing only with the histories, not with allergic tests and studies.)

Table 2.—*Reports from 106 Patients with History of Asthma, Hives, or Hay Fever as to Complaints of Postnasal Mucus*

Milk, glasses consumed per week	Patients in group	Complaint of mucus Cases		Not bothered with mucus Cases	
		Number	Per Cent	Number	Per Cent
0-5	45	29	64	16	36
6-9	18	12	66	6	34
10 or more	43	19	44	24	56

QUANTITY OF POSTNASAL MUCUS FOUND ON EXAMINATION

Nose and throat examinations were made on 157 patients with no history of colds or other upper respiratory disease to see if the milk drinking patients were actually secreting an increased quantity of mucus. Excess mucus was considered to be present if on the pharynx or in the nasopharynx an accumulation of mucus in excess of ½ inch in diameter or a string of mucus over 1 inch long was observed. In the nose any accumulation of mucus, excluding slender strings of "mucus bridges," was considered excess mucus. Table 3 reveals findings seeming to

TABLE 3.—*Findings from Examination of Nose and Throats of 157 Patients*

Milk, glasses consumed per week	Patients in group	Excess mucus found Cases Number	Per Cent	No excess mucus Cases Number	Per Cent
0-5	78	41	52	37	48
10 or more	79	40	50	39	50

establish that there is no difference in the prevalence of excess mucus between the milk drinking and non-milk drinking groups.

SUMMARY

Of 647 adult patients with apparently normal noses and throats, nearly one half complained of being bothered with postnasal mucus. The percentage of patients making this complaint was practically the same among those who drank milk as among those who did not drink milk. From nose and throat examinations it was found that the percentage of those patients with excess mucus was also practically the same among both milk drinking and non-milk drinking groups.

CONCLUSIONS

Reports from over 600 patients have indicated that milk is not the cause of annoying postnasal mucus. The cause of this common disturbance needs further investigation. Milk is too valuable a food to be omitted from the diet because of the popular belief that "milk makes mucus."

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REFERENCES

1. McLester, James S.: Nutrition and diet in health and disease, 3rd ed., W. B. Saunders Co., Philadelphia, p. 179 and p. 185, 1939.

2. Proetz, Arthur W.: Postnasal drip, the current nightmare, The Annals of Otology, Rhinology and Laryngology, LIV, 739 (Dec.), 1945.

A Further Study of Pneumonia in San Francisco, 1944-1946

GEORGE F. WARNER, M.D., and FRANK H. GARDNER, M.D., *San Francisco*

IT is the purpose of this study to supplement a previous survey of pneumonia in San Francisco in 1943-1944,[1] by reporting the patients observed on a medical service (University of California) for the two-year period from July 1944 to July 1946.

As in the earlier series, the patients comprised in the present study were drawn from lower economic groups, exhibited sub-optimal nutrition, and were not infrequently subject to acute and chronic alcoholism.

Again, no patients were chosen whose diagnosis of lobar pneumonia was not clear-cut, and none were selected whose infection was secondary to any other known disease process. All diagnoses of pneumonia were substantiated by a positive chest roentgenogram.

A total of 202 cases with pneumonia were seen. Of these, 172 were pneumococcal in origin; 27 were classed as primary atypical pneumonias; two were streptococcal; and one was due to the Friedlander B organism.

Our interest centers on the majority of the cases caused by the pneumococcus organism (85 per cent). One hundred and twenty-two of the cases of pneumococcus pneumonia (71 per cent) occurred in men, and 50 cases (29 per cent) in women. Twenty per cent of the women and 39.4 per cent of the men were over the age of 50. A comparison of age incidence with mortality is shown in Table 1.

Typeable pneumococci were isolated in 137 of the 172 cases (79.7 per cent). The remaining patients either died before adequate typing could be done or possessed pneumococci which would not type. Pneumococcus Type I produced the highest incidence, being responsible for 21.9 per cent of the typed cases. Type VII, with the highest incidence in 1943-44, was second, causing 14.6 per cent of the cases. Type III was the etiologic agent in 10.4 per cent, and Type IV in 7.3 per cent. The rest of the types were scattered diffusely throughout the remainder of the series.

TABLE 1.—*Comparison of Age Incidence with Mortality*

Age (years)	No. Cases	No. Deaths	% Mortality
Under 20	4	0	0.0
20-29	20	0	0.0
30-39	40	3	7.5
40-49	50	9	18.0
50-59	19	4	21.0
60-69	23	5	21.7
Over 69	16	5	31.2
All Cases	172	26	15.1

There was no correlation between the type of organism and seasonal incidence. Forty-two per cent of the cases occurred in the four-month period from December through March, the remaining months showing almost equal incidence.

An attempt has been made here to correlate vital factors on entry with mortality, and in some instances with length of hospital stay. The overall mortality of the patients with pneumococcus pneumonia was 15.1 per cent with an average hospital stay of 13.8 days.

Entry Temperature: In this study, those patients

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entering with either a very high temperature (106 F. or over) or with a low temperature (100 F. or less) had a mortality rate of approximately 30 per cent; whereas those with temperatures ranging from 101 F. to 105 F. had a mortality of approximately 13 per cent. The majority of patients (67.5 per cent) entered with a temperature between 102 F. and 104 F., and stayed an average of 13.4 hospital days, with an average mortality of 14.6 per cent.

Entry White Blood Count: 73 per cent of the patients entered with a white blood count ranging between 5,000 and 25,000, had an average mortality of 7.9 per cent, and stayed an average of 14.5 hospital days. Those with white blood counts of less than 5,000 suffered a mortality of 64.3 per cent, and those with an increase above 25,000 had a mortality of 21.9 per cent.

Entry Urinary Albumin: It has been our impression that albuminuria, even though mild, offers a poor prognosis in patients with pneumococcus pneumonia. This impression is not supported in an analysis of this series, except for those cases showing a marked degree of albuminuria. The presence of albumin was graded arbitrarily from plus 1 to plus 4, where plus 1 was the slightest and plus 4 the greatest amount present. Entry determination of urinary albumin was done in all but one of the 172 cases. None were included who had albuminuria from other known causes. Forty-five per cent of the patients had no albumin in their urines: the mortality among this group was 18.2 per cent. A plus 1 and plus 2 albuminuria was exhibited by 47.4 per cent of the patients with a mortality of 7.4 per cent. Only those patients with plus 3 and plus 4 albuminuria exhibited an adverse effect with a mortality of 46.1 per cent.

Blood Culture: As can be seen from Table 2, mortality increased from 2.7 per cent in patients with a negative blood culture to 29.7 per cent among those with a positive culture. A positive blood culture on entry occurred in 46.7 per cent of the typed cases.

Lobes Involved: Single involvement of the left lower lobe was commonest, occurring in 36 per cent of the cases, with a mortality of 8.6 per cent. Mortality rate appeared higher with right upper lobe involvement with a rate of 22.3 per cent. It is interesting that all cases of acute psychoses (non-alcoholic) accompanying pneumococcus pneumonia occurred in patients with right upper lobe involvement. Multiple involvement occurred in 19.2 per cent of the cases, with a mortality of 39.5 per cent. No patients were observed with more than three lobes involved.

Days Ill before Treatment Instituted: An important factor affecting mortality was delay on the part of the patient before entering for proper therapy. This factor was more apparent in men, who were ill an average of four days before treatment was instituted. The women of the series appeared for treatment an average of three days after onset of their pneumonia. As would be expected, hospital stay and mortality were increased by delay in initiation of therapy. Those patients ill one to two days before treatment stayed an average of 12.6 days and suffered a mortality of 10.8 per cent; those ill six days or longer before therapy stayed 20.6 hospital days with a mortality of 35.3 per cent.

Acute Alcoholism on Entry: This was much more common among the men; only one of the 25 cases of acute alcoholism occurred in a woman. Approximately one out of every five male patients with pneumococcus pneumonia was acutely alcoholic on entry. The mortality among these patients was 25 per cent. In addition, severe complications occurred in approximately one-half of these patients.

COMPLICATIONS

Among the 172 cases of pneumococcus pneumonia, 74 separate complications occurred, giving an incidence of 43 per cent. As would be suspected, complications were more severe and prolonged in those patients in older age groups, particularly among those ill five days or more before hospitalization and treatment. The average hospital stay for those patients surviving their complications was prolonged to 37 days. Mortality was increased to 32.5 per cent in the presence of complications. Patients with complications had positive blood cultures in 54.2 per cent.

Sterile pleural effusion occurred in approximately one out of every nine patients with pneumococcus pneumonia. Of a total of 20 sterile pleural effusions, four occurred in patients treated with sulfa drug alone, four among those treated with penicillin alone, and 12 among those treated with sulfa and penicillin combined. Further pertinent data regarding complications is summarized in Table 3. No cases of pneumococcus endocarditis were encountered.

Before specific treatment was instituted, routine blood count and urinalysis was performed, and spu-

TABLE 2.—*Relationship Between Pneumococcus Type, Blood Culture, and Mortality*

Type	% Incidence	Number Cases Total	Number Cases — Blood Culture	Number Cases + Blood Culture	Number Deaths Total	Number Deaths — Blood Culture	Number Deaths + Blood Culture	% Mortality — Blood Culture	% Mortality + Blood Culture
I	21.9	30	13	17	2	0	2	0.0	11.8
VII	14.6	20	12	8	4	1	3	8.3	37.5
III	10.4	14	6	8	4	0	4	0.0	50.0
IV	7.3	10	6	4	1	0	1	0.0	25.0
V	5.1	7	2	5	1	0	1	0.0	20.0
XII	5.1	7	3	4	2	0	2	0.0	50.0
XXV	4.4	6	2	4	2	0	2	0.0	50.0
All others		43	29	14	5	1	4	3.5	28.6
Total typed cases		137	73	64	21	2	19	2.7	29.7

TABLE 3.—*Relationship Between Complications, Hospital Stay, and Mortality*

Complication	No. Cases	Average Hospital Stay—Days	No. Deaths	% Mortality
Sterile pleural effusion	20	21.3	1	5.0
Peripheral vascular collapse and pulmonary edema	11	4.5	10	91.0
Empyema	9	49.4	0	0.0
Spread to other lobes after entry	9	28.1	3	33.3
Cardiac arrhythmia	7	22.3	2	28.6
Meningitis	5	10.0	3	60.0
Early psychosis (non-alcoholic)	5	14.6	2	40.0
Lung abscess	3	49.0	1	33.3
Pericarditis with effusion	3	28.0	1	33.3
Hepatitis with jaundice	2	10.5	1	50.0
Total	74	23.8	24	32.5

tum and blood culture collected for pneumococcus typing. Specific therapy consisted of either sulfa drug or penicillin alone, or sulfa and penicillin combined. A gross mortality of 15.1 per cent occurred among all patients treated. The usual chemotherapeutic agent used was sulfadiazine, usually given in doses of 5 grams intravenously in 1,000 cc. of lactate-Ringer's solution, with a simultaneous 2 to 4 gram oral dose to bring the blood level up quickly. This level was maintained by 1 gram oral doses every four hours, and continued until a satisfactory clinical response was obtained, and until the patient remained afebrile for two days. No serious unfavorable drug reactions were noted. Urinary pH of 7.0 was maintained by adequate oral doses of sodium bicarbonate. Potassium bicarbonate was used in the presence of edema.

When penicillin was used, the average patient received the sodium salt intragluteally in 25,000 unit doses every three hours using a volume injection of 1 to 3 cc. This was continued until the clinical condition seemed satisfactory with no fever for three to six days. Occasionally the early morning injections were omitted during the last few days of therapy.

Those patients who were most seriously ill, and particularly those manifesting the complications enumerated in Table 3, received initial therapy with sulfadiazine and were later placed on penicillin as well. In 20 instances treatment with these substances was simultaneous, and in 31 instances it was consecutive. The higher mortality rate in these groups is accounted for by the seriousness of the illness and does not indicate failure on the part of penicillin. A summary of therapeutic agents used in relation to mortality is given in Table 4.

If patients comparable in all respects are chosen,[1] those not receiving penicillin (1943-44) had an average mortality of 22.3 per cent as compared with a mortality of 15.1 per cent in this series treated with sulfa and penicillin.

In addition to general supportive and specific therapy, oxygen, plasma, coramine, aminophylline, and hypertonic glucose were used in patients with peripheral vascular collapse and pulmonary edema. In addition to intramuscular penicillin, meningitis was simultaneously treated with 25,000 units of penicillin intraspinally one to two times daily; empyema with 50,000 units of penicillin intrapleurally once daily; pericarditis with effusion with 50,000 units intrapericardially daily. Cardiac arrhythmia consisting of paroxysmal auricular flutter and fibrillation, and paroxysmal ventricular tachycardia, required rapid recognition and treatment with digitalis and quinidine in appropriate doses.

TABLE 4.—*Summary of Specific Treatment*

Therapeutic Agent	No. Cases	% Treated	No. Deaths	% Mortality
Sufadiazine	83	48.2	9	10.8
Sulfamerazine	17	9.9	2	11.8
Penicillin	21	12.2	4	19.0
Sulfa and Penicillin	51	29.7	11	21.6
Total	172	100.0	26	15.1

SUMMARY AND CONCLUSIONS

1. In the period from July 1944 to July 1946, 202 patients with pneumonia were seen at the San Francisco Hospital on the University of California Medical Service.

2. The pneumococcus organism was responsible for 85.2 per cent of these cases, and hence was discussed in detail. Type I pneumococcus produced the highest incidence, followed closely by Types VII and III.

3. An older age group, with frequently associated alcoholism in the males, was involved which adversely affected recovery.

4. The treatment of pneumococcus pneumonia and its complications is outlined.

5. Serious and frequently fatal complications were seen in 43 per cent of the patients. Hospital stay was lengthened from an overall average of 13.8 days to 37 days in patients with complications.

6. An overall mortality of 15.1 per cent occurred among the patients with pneumococcus pneumonia. If those patients dying in the first 24 hours of treatment, those ill one week or more before treatment was instituted, and those with acute alcoholism on entry are all eliminated, a much more favorable mortality figure of 7.1 per cent can be obtained.

7. The influence of entry temperature, white blood count, urinary albumin, positive blood culture, and the number of lobes involved, on mortality and length of hospital stay are discussed.

8. Albuminuria did not seem to be a serious prognostic sign unless present in large amounts.

9. Comparison with a similar series of patients (1943-44), not treated with penicillin, reveals a reduction in mortality from 22.3 per cent to 15.1 per cent.

10. In spite of this favorable progress, this study suggests that the poor general resistance among these patients is the major obstacle to further significant reduction in mortality rates.

REFERENCES

1. Warner, G. F., Li, J. G., and Farber, S. M.: A study of pneumonia in San Francisco, 1943-1944, California and Western Medicine, 62:161 (April), 1945.

A Cause for the Reestablishment of Communication Following Ligation of Patent Ductus Arteriosus

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RECENT reports show that reestablishment of communication between the aorta and the pulmonary artery following ligation of the patent ductus arteriosus can be anticipated in from 5 to 20 per cent of the cases. Failure to close the shunt is usually ascribed to the tightness of the ligatures. Either they are not drawn tightly enough, in which case the murmur recurs within the first few postoperative days, or they are drawn too tightly and cut through the ductus wall, in which case the murmur recurs later. The case reported here indicates that one other factor must be considered as a possible cause of re-establishment of communication.

CASE REPORT

The patient was a seven-year old girl whose cardiac reserve was diminished by a patent ductus arteriosus. A loud, continuous, humming murmur was present and a thrill could be felt throughout the left chest. Ligation of the patent ductus arteriosus was carried out through a postero-lateral incision with removal of the left fourth rib. The ductus measured 1 cm. in diameter and 7 mm. in length. (Fig. 1, A). The procedure was technically easy. Two one-eighth inch silk umbilical tapes were used side by side as ligatures and the knots were transfixed with two silk sutures (Fig. 1, B). The thrill was completely obliterated.

The postoperative course was unsatisfactory from the outset because of infection. Atelectasis of the lower lobe of the left lung was observed on the roentgeno-

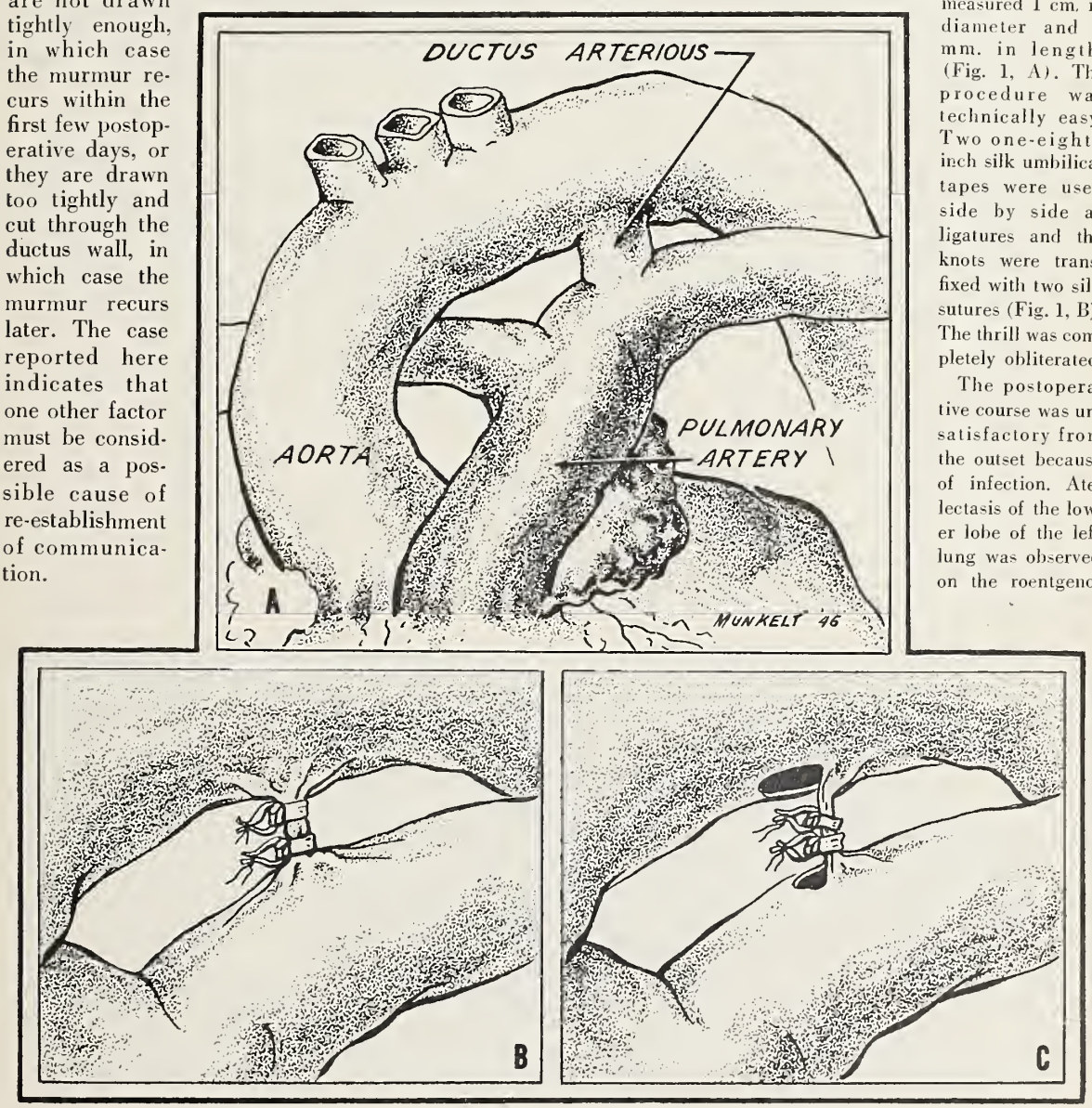


Figure 1.—(a) Diagrammatic drawing showing relative length and diameter of ductus. (b) Ligation of ductus with two silk tape ligatures. Ductus is constricted throughout its length with maximum tension at its attachments to parent vessels. (c) Ductus and ligatures as found at autopsy. Communication became reestablished between the openings in the aorta and pulmonary artery which resulted from the attachment of the ductus at these points of junction.

gram of the chest 24 hours after operation and this consolidation had increased at 48 hours. In 72 hours there was fluid in the left chest and on the fifth postoperative day the amount of fluid had increased and there was a shift of the mediastinum to the right. At this time, 200 cc. of fluid which was slightly bloody was aspirated. Smears of this fluid were negative but cultures showed a growth of hemolytic Staphylococcus aureus. At 96 hours, 100 cc. of fluid, which was more bloody, was withdrawn and this time the organisms were found in the smears. On the fourth postoperative day a murmur was heard over the pulmonic area and on the ninth day this murmur had become definitely humming in character. On the tenth day the central portion of the incision was opened, old clots of blood were removed, and a tube was inserted for drainage. On the 17th day a portion of the ninth rib was resected and the mediastinum was explored with the finger. No hematoma or abscess was found. A large tube was inserted for continuous irrigation. Gross hematuria, which persisted for five days, developed following an urticarial reaction to transfusion and the right lung as well as the left became consolidated. Sulfadiazine, large doses of penicillin, blood and serum transfusions failed to check the infection and the patient died on the 22nd postoperative day.

Autopsy revealed an unexpected explanation for the reestablishment of communication between the aorta and the pulmonary artery.

There was massive bilateral consolidation of both lungs and empyema on the left. There was edema of the mediastinum with leukocytic infiltration, but the communication with the left pleural cavity had closed. The ductus lay as a necrotic cord within the ligatures. It was detached for three-quarters of its circumference from its attachment to the aorta and for one-third of its circumference from its attachment to the pulmonary artery, leaving round openings in both vessels (Fig. 1, C). It was apparent that the ductus had become detached at its junctions with the main vessels and communication had become reestablished between these two openings.

The detachment of the ductus from the parent vessels was probably due to one of two factors: (1) Tension on the wall of the ductus at the points of junction with the main vessels due to the wide constriction of the ductus and the continuous pulsation of the vessels. By the application of the ligatures, the length of the wall of the ductus was actually increased from 7 to 15 mm. with the points of greatest tension at the points of junction with the main vessels. (2) Necrosis of the ductus as a result of the ligation, with separation at the points of junction because of intra-arterial pressures of the aorta and pulmonary artery. The fact that the ductus was separated from both vessels would suggest that the necrosis preceded the separation and therefore might have been a primary factor in the separation.

SUMMARY

A case is reported in which the reestablishment of communication following ligation of a patent ductus arteriosus was found to be due to detachment of the ductus from the aorta and pulmonary artery at the points of junction with these vessels. Two possible explanations for this detachment are suggested.

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California Cancer Commission Studies*
Chapter XI

Cancer of the Lip

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FAILURE to reduce the mortality in carcinoma of the lip to near zero is well-nigh inexcusable. The great majority of these lesions develop slowly through well recognizable precancerous states over a considerable period of time. They are invariably on the exposed mucosa of the lips, usually in full view of the patient and readily accessible to simple biopsy for accurate diagnosis. Lesions arising on the *skin* of the lip should not be confused with these, for they behave as skin cancers elsewhere and should be so treated. In most instances carcinoma of the lip is relatively slow in its local growth and usually dilatory in its spread to immediately adjacent regional lymph nodes. The failure to cure cancer of the lip is the direct responsibility of the patient who does not seek treatment soon enough, or of the physician who neglects proper measures for prompt diagnosis and immediate, radical treatment.

Cancer is the first diagnostic possibility to be considered in any lesion of the lips, particularly in males past middle age. The physician also has an important function in the prevention of this form of cancer through proper treatment of precancerous lesions.

PRECANCEROUS LESIONS

The term "precancerous" implies the possibility and not the inevitability of malignant growth. Approximately 50 per cent of cancer of the lip arises in such lesions.

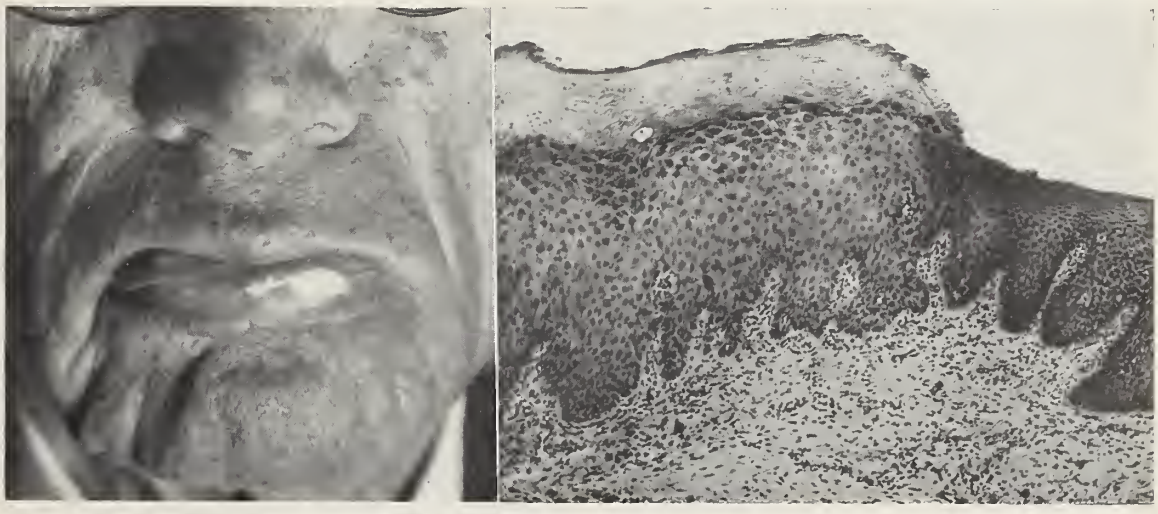
A. *Leukoplakia and Keratoses.* These two processes represent the most common precursors of cancer of the lip. Inasmuch as they resemble one another in their etiology, histopathology, progress and management, they may conveniently be considered together.

1. *Etiology.* Chronic irritation is the most important factor. This may come from repeated exposure to the sun and wind, chemical and thermal irritants and repeated trauma, such as mucosal tears from cigarette paper. Vitamin deficiencies may also be of importance.

2. *Clinical Appearance.* Leukoplakia varies from areas of pallor or greyish white film over the mucosa (Figure 1) to localized single or multiple diffuse white or faintly bluish plaques which are soft to firm, flat or slightly elevated. (Figure 2.)

Keratoses may be single, multiple (Figure 3) or involve the lip diffusely; the latter occurs more commonly in younger individuals. In older persons areas of alternate crusting and scaling eventually lead to erosion and a chronic inflammatory exudate in the submucosa. Thick crusts of keratotic epithelium may elevate such lesions above the adjacent mucosa. Repeated exfoliation with slight bleeding is a frequent signal of early carcinoma developing in the base of the lesion.

3. *Treatment. Any distinct induration, erosion or ulceration in leukoplakia or keratosis demands immediate biopsy.* Superficial lesions, small in area, are well treated by electrocoagulation, actual caut-



A B

Figure 1.—(a) Leukoplakia. (b) Photomicrograph of (a) showing abrupt border of dense keratotic surface, hyperplasia of underlying squamous cells.

*Organized by the Editorial Committee of the California Cancer Commission.



Figure 2.—Diffuse keratosis with erosion and secondary infection. Illustrates difficulty in differentiation from carcinoma.

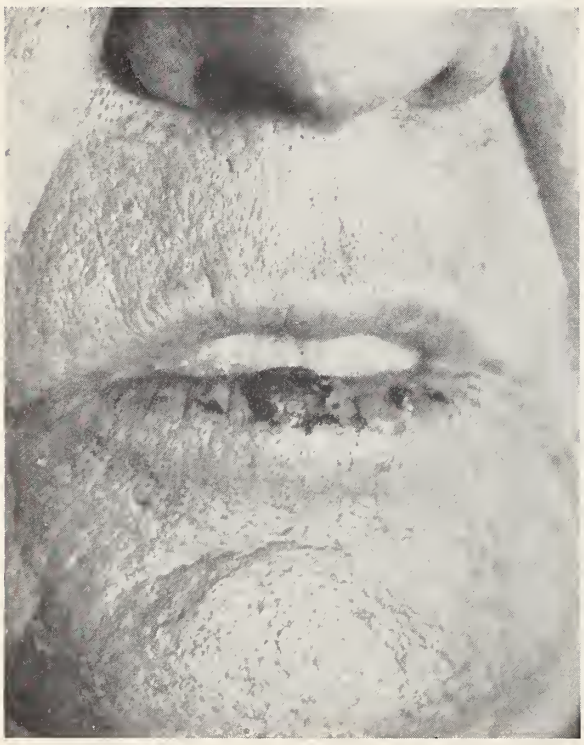


Figure 3.—Multiple localized areas of keratosis. Central lesion resembles papillary carcinoma.

ery, or excision. The latter offers the dual advantage of being diagnostic and curative, and in older individuals confirms the benign character of this classical precancerous process. Diffuse states of leukoplakia can be treated by brush cautery or wide mucosal excision and cheiloplasty. Leukoplakia which has become fissured, piled up or indurated should be completely excised. This can be done by elliptical incisions parallel to the vermillion border and undercutting the mucosa to secure closure. Filmy leukoplakia should be carefully watched. These processes do not respond to irradiation.

4. *Preventive Measures.* The patient who has developed leukoplakia or keratoses after definitive treatment of distinct lesions should employ measures aimed at prevention of further abnormal changes. Young individuals with diffuse, very superficial changes usually respond well to daily use of boric acid or plain lanolin ointment. Patients should carry with them a tube of white pommade and apply it several times daily to the lips. Large doses of B-complex vitamins, preferably in the form of brewer's yeast, may be helpful. Some individuals acutely sensitive to actinic radiation may be forced to a change of occupation to avoid sunshine. The use of tobacco should be discontinued or cut to the minimum. Oral hygiene should be scrupulous.

B. *Cheilitis, Fissures and Ulcers.* Diffuse inflammation, usually of the lower lip, is most common in young individuals with actinic intolerance. (Figure 4.) In advanced nutritional deficiencies the process may involve the commissures (perleche). Treatment consists in removal of causative factors and correction of nutritional deficiencies.

GRANULOMAS

A. *Pyogenic Granuloma* (Figure 5). Pyogenic granuloma is a chronic inflammatory proliferative process secondary to local non-specific infection. Trauma is usually recognized as the initiating factor, frequently by teeth or food particles. It appears as an elevated, round or ovoid, reddish tumor which is soft in its early stages; the surface has a "raspberry" appearance. Older lesions regress spontaneously, become fibrotic or become the site of warty, papillary excrescence. Histological examination shows characteristic form of highly vascular, organizing granulation tissue. The treatment of pyogenic granuloma, once the diagnosis is definitely established by biopsy, is local destruction by escharotic electrocoagulation or light doses of low voltage roentgen therapy.

B. *Tuberculosis.* This is a *rare* lesion of the lip, occurring near the vermillion border, nearly always associated with cavitating pulmonary and frequently oral tuberculosis. It appears as a punched out, soft ulcer, frequently with a greyish base. It is usually quite painful. Biopsy is the only dependable method of diagnosis.

C. *Syphilis.* The lip is an occasional site of a primary luetic lesion. The appearance of a well circum-

scribed, elevated denuded lesion with moderate induration suggests cancer. However, in the case of luetic lesion, its short duration, concommitant acute lymphadenopathy, positive darkfield and later positive Wassermann will establish the diagnosis.

RETENTION CYSTS (MUCOUS CYST, SIMPLE CYST)

These cysts are due to occlusion of a mucous gland duct, secondary to inflammation or trauma. They are dome shaped, bulging, translucent bluish swellings, usually on the buccal surface of either lip. They are fluctuant unless under extreme pressure of contained secretion. Treatment consists in local excision with entire removal of the capsule.

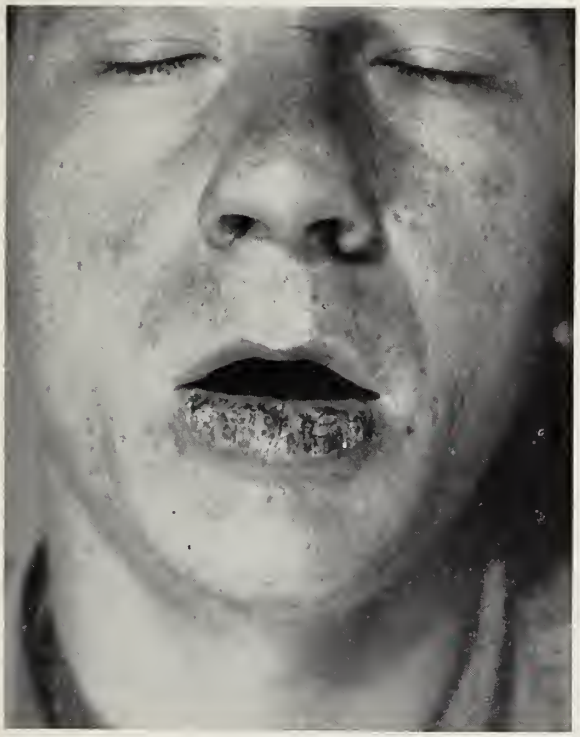


Figure 4.—Diffuse cheilitis in young individual.



Figure 5.—Pyogenic granuloma.

BENIGN NEOPLASMS

Benign neoplasms may be of epithelial or, less commonly, of mesodermal origin.

A. *Squamous Papilloma.* These are soft, papillary or warty excrescences sometimes occurring around the commissures. *Squamous carcinoma may arise in such originally benign lesions.* The danger signals are increased growth, induration or ulceration. The treatment is adequate local excision with a margin of normal tissue.

B. *Hemangioma. Lymphangioma.*

1. *Congenital*

a. The familiar "birth mark" of infants frequently involves the stomal structures with submucosal extension into the lips. Both the simplex and cavernous types of hemangioma are seen. Superficial lesions respond to minute doses of surface irradiation, carbon dioxide snow, or electro-desiccation. The deeper and cavernous tumors are best treated primarily with external irradiation, insertion of weak radon gold seeds, injection of sclerosing solutions, and surgical excision of the residual tumor if required with appropriate cheiloplasty.

b. *Lymphangiomas* (cystic hygroma) produce some degree of the condition referred to as macrocheilia, a diffuse soft, spongy enlargement of the lip, usually without mucosal involvement. Irradiation is ineffective, and surgical measures are indicated.

c. *Mixed hemangioma - lymphangioma* occurs rarely. The response to irradiation will be in proportion to the amount of angiomatous elements present.

2. *Acquired Angioma*, involving the lips in adults are usually the result of trauma. They constitute smooth, bluish to reddish, soft swellings. Surgical excision is required.

C. *Mixed Salivary Gland Tumors.* Five per cent of these tumors originate in accessory salivary glands, and of these, rare examples are seen in the lips. Their structure and potentially malignant characteristics are identical with their more usual counterpart in the parotid gland.

D. *Melanoma* of peri-stomal location usually has its origin in the adjacent skin, but there are rare examples of a primary melanoma of the lip. They show the characteristic brown to blue-black pigmentation, and require differentiation from the hemangiomas. Immediate wide excision is required.

SQUAMOUS CARCINOMA (EPIDERMOID, PRICKLE CELL CARCINOMA)

A. *Definition.* Squamous-cell cancer is a malignant neoplasm arising in the mucosa of the lips and is capable of metastasizing to regional cervical lymph nodes. Squamous carcinoma of the lip proper must be differentiated from malignant neoplasms arising

in adjacent sites, which may invade the lip secondarily, such as basal cell carcinoma of the skin, melanoma, carcinoma of the alveolus.

B. *Etiology.* Squamous carcinoma arises almost uniformly on a basis of chronic traumatism, frequently in an already profoundly altered tissue bed provided by the "precancerous" factors in the individual's tissue reacting to unfavorable environmental stimuli. Yet many individuals exhibiting such stigmata do not develop cancer, while in others cancer of the lip may occasionally arise in apparently healthy epithelium.

C. *Incidence.* The lower lip is the primary site in 96 per cent, the commissures and upper lip in 4 per cent. Occupational exposure makes it a cancer largely seen in males, 80 per cent. Predominantly it is a disease of late middle life and old age, although a few cases occur in young adults.

D. *Clinical Types.* As in many forms of cancer, the gross morphology of the tumor is a reasonably reliable clue to its pattern of growth and degree of malignancy.

1. *Papillary, Extrovertive Type.* In its earliest stage this type is seen as a thickened, slightly elevated, indurated plaque in the mucosa proper, or as a warty lesion which crusts and scales superficially. (Figure 6.) Its progress is that of peripheral growth, with a gradual advance of its border in the direction of the commissure. It may become considerably elevated and form a protruding verrucous mass. The spread of this type toward the muscularis is dilatory, and it is usually late in its metastases to the regional nodes. Eventually it ulcerates, undergoes necrosis, and pursues the course of an infiltrating carcinoma.

2. *Ulcerative, Infiltrating Type* (Figure 7 and 8). This form may begin as a flat plaque which ulcerates early and is destructive from the beginning, or it may be seen first as a submucosal nodule with smooth overlying mucosa, to which it is attached. An ulcer is soon produced which exhibits loss of substance of the lip. This tumor soon infiltrates the muscularis. Secondary infection may be severe, with cellulitis and edema of the adjacent chin and regional lymphadenitis.

E. *Metastases.* Generally carcinoma of the lip is late to metastasize to the cervical nodes, the exceptions being provided by the more malignant deeply ulcerating types. Many cases are seen of six to twelve months' duration without palpable regional nodes. Cancer of the lip almost uniformly pursues a regular anatomical pattern of lymphatic spread. The nodes involved, in order of succession, are usually: submaxillary or submental, superior cervical (carotid), lower cervical, and supraclavicular.

F. *Histopathology.* The microscopic appearance varies greatly, from well differentiated squamous carcinoma to a purely anaplastic type. The majority are well differentiated.

G. *Treatment. Cancer of the lip is a lethal disease.*

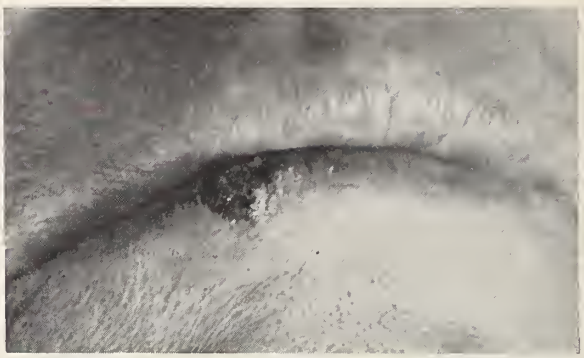


Figure 6.—Early papillary form of carcinoma.
Courtesy of Dr. George Sharp.



Figure 7.—Early ulcerative form of carcinoma.

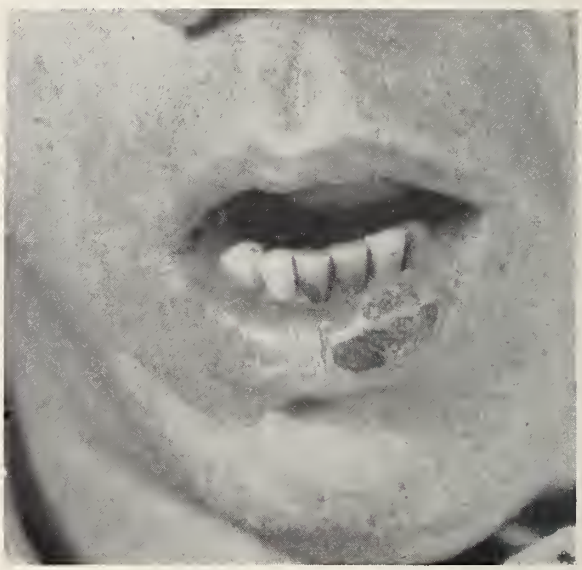


Figure 8.—Ulcerative carcinoma in a 19 year old man.

Any lesion of the lip that persists more than four weeks should be considered as cancer until a biopsy is taken. Proven cancer of the lip requires *radical* treatment by surgery or irradiation. The first treatment should be the last. While 90 per cent of uncomplicated, previously untreated lip cancer is curable, only 40 to 60 per cent of recurrent lip cancer can be cured.

The treatment of lip cancer requires total destruction, or complete, radical removal of all neoplastic cells by whatever method is employed. It requires control of the primary tumor and evaluation of possible lymph node involvement and treatment thereof. Although the best possible cosmetic result will be sought, *this issue should be recognized as entirely subordinate to the more urgent problem of cure. Inadequate treatment is worse than none at all.*

1. *Treatment of Primary Tumor.*

a. Lesions up to 2 cm. in greatest diameter, with extension not more than half-way toward the cheilogingival groove.

This group includes lesions ranging from early, superficial to moderately advanced, or the majority of cases seen in ordinary practice. For these lip cancers (Figures 9 and 10), cancericidal doses of x-ray or radium and surgical excision are equally effective and produce the same cure rate. Many radiologists contend that better cosmetic results are obtained by irradiation. V-excisions must be full thickness resections which go far wide of the tumor, and the margins should be examined for microscopic verification of the surgeon's judgment. With irradiation, for tumors invading the lip for a depth of 1 cm. or more, surface irradiation needs supplemental interstitial radium.

b. *Lesions deeply infiltrating* toward or involving the cheilo-gingival groove.

These advanced tumors are unsuitable for irradiation methods. Radical surgery is required. X-ray films to rule out involvement of the mandible are necessary; and even if the latter be present, cure may still be achieved in favorable cases with resection of the mandible.

Radical surgical treatment of these advanced cases implies a measure of skill and special experience, and a willingness to undertake an arduous, time-consuming and mutilating procedure. It involves removal of most of or all the lower lip and chin, wide mobilization of skin and mucosal flaps from the face and neck and buccal surfaces respectively, with immediate plastic reconstruction of a new lower lip.

c. *Recurrent carcinoma of the lip*, postoperative or postirradiation, is best treated by radical surgery.

2. *Treatment of Regional Lymph Nodes.* The primary consideration is to determine whether there is clinical evidence suggestive of regional nodal metastases. Some ulcerated carcinomas of the lip exhibit a regional lymphadenitis which regresses after control and healing of the primary site. For this reason, it is best to delay final decision on the regional nodes until six weeks after treatment of the primary tumor. At this time the patient's status may be evaluated according to the following criteria, providing the lip lesion is controlled:

a. No submental or submaxillary lymphadenopathy can be determined:*

* It should be remembered that a few small (0.5 to 1.0 cm.) soft to even moderately firm nodes may normally be palpated in the neck.



Figure 9.—Ulcerative carcinoma before and after treatment by irradiation.



Figure 10.—Diffuse papillary carcinoma before and after treatment by irradiation.

Only one out of ten such patients will subsequently develop metastases. To perform routine "prophylactic" block dissections on such patients would then be equivalent to doing nine unnecessary procedures for the benefit of one patient who can be almost as effectively treated by prompt action when his nodes do appear. Prophylactic neck dissections in cancer of the lip are therefore not recommended. So-called prophylactic irradiation of neck nodes is of no value and should be condemned.

b. Six weeks after treatment, regional nodes suggestive of metastases are present:

In such cases immediate block dissection is required. Usually a suprahyoid neck dissection is adequate, cleaning out both submental and submaxillary triangles and removing both submaxillary salivary glands. In occasional lesions located lateral to the midline in which a carotid node seems involved, a block dissection of the entire side of the neck is indicated. Some surgeons do a complete neck dissection if the submaxillary triangle is involved. Radiation therapy has no place in curative treatment of metastases in cervical nodes, for here the neoplasm develops a radioresistant status that makes such treatment palliative rather than curative.

3. *Palliative Treatment.* Incurable primary or metastatic disease is treated for palliation by radiation therapy.

PROGNOSIS

The cure rate in carcinoma of the lip is higher than for any other form of oral cancer. Permanent cure of the primary tumor is achieved in 90 per cent of consecutive cases. By modern procedures about 80 per cent of patients will be free of disease after five years, including those treated for regional metastases. In the group having metastases the five-year cure rate will be 25 to 30 per cent.

NOTE BY EDITORIAL COMMITTEE

When the California Medical Association published its cancer studies in 1936 there was wide divergence of opinion regarding the treatment of the nodal area in cancer of the lip. Such divergence still exists. Many surgeons advise routine bilateral suprahyoid dissections in *all* cases. At the other extreme are those who advise node dissection *only* in the presence of proven operable metastasis.

No one can take issue with the necessity for the procedure when metastasis is proven and operable. The question of dissection in *all* cases is not so easily settled. Neither palpability nor enlargement, in itself, signifies metastasis. Normal nodes are frequently palpable; enlargement may be due to inflammation. Impalpability, on the other hand, does not signify absence of metastases in all cases. However, the percentage of unexpected involved nodes, in various published series of routine dissections ("prophylactic") is so small as to gainsay that course when one considers the high percentage of operations performed unnecessarily. It appears even less warranted when one recognizes that in some reported series the operative mortality approaches closely the percentage of cases in which metastatic nodes are found and presumably benefited. In some series the operative mortality is even greater.

The Editorial Committee believes that routine dissection is contraindicated, that somewhere between the two extremes is the course to be followed as determined by the merits of the individual patient.

If surgical treatment is contraindicated, cervical metastasis may be cured in some cases by a proper use of combined external and interstitial irradiation. All is not lost because a patient cannot stand operation or has a recurrence in the neck following dissection.

Chapter XIII of the California Cancer Commission Studies "Cancer of the Tonsil and Pharynx," by Lewis F. Morrison, M.D., will appear in this section in the February issue of California Medicine.

California MEDICINE

OWNED AND PUBLISHED BY THE CALIFORNIA MEDICAL ASSOCIATION
450 SUTTER, SAN FRANCISCO 8 PHONE DOUGLAS 0062

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EDITORIALS

Vascular Surgery

The development of each of the surgical specialties has depended upon the evolution of either diagnostic or therapeutic techniques. The vaginal speculum, the cystoscope, the endoscope, encephalography, and many other technical facilities have each opened new vistas for the surgical relief of human suffering. Advances in the more fundamental fields of anesthesia, physiology, pathology, and biochemistry, and the use of the antibiotics have furnished a safe basis without which new surgical approaches might have proved too hazardous. Vascular surgery is rapidly approaching the gestation phase as an off-shoot from general surgery and it may be well now to examine its antecedents and its prospects for life in order to provide for it the best available opportunities for growth and development.

The control of hemorrhage has presented a problem since the earliest days of surgery. The ligature of arteries was mentioned by Celsus and Antyllus, although this procedure remained unknown until again brought to light by Paré. The names of the great surgeons of the past—Hunter, Sir Astley Cooper, Dupuytren, Syme, Trendelenberg, and many others—are intimately associated with the early history of vascular surgery but it was not until the introduction of the antiseptic era by Lister that the possibilities of reparative and restorative operations on blood vessels became manifest. It is interesting to note that Lister himself was the first to record, in 1875, the successful antiseptic closure of a blood vessel—the axillary vein.[3] In more recent times the great contributions of Halsted and Mont. Reid, Carrell, and others have served as milestones of progress. It was Halsted[2] who wrote, "One of the chief fascinations of surgery is the management of wounded vessels, the avoidance of hemorrhage. The only weapon with which the unconscious patient can immediately retaliate upon the incompetent surgeon is hemorrhage." Rudolph Matas today is recognized as the founder of vascular surgery, and his scholarly history of the surgery of blood vessels[4] remains a masterpiece.

Vascular surgery has hardly yet become a "specialty." The surgeons who made these advances did so only incidentally during the course of their activities in the field of general surgery. Is there room or actual need for vascular surgery as a specialty? In an address delivered before the International Congress of Medicine in London in 1913 Harvey Cushing[1] considered the significance and purpose of surgical specialties. He concluded, "The existence of the operating specialist as contrasted with the general surgeon is justified only if the former takes advantage of his opportunities to contribute to the knowledge of the disorders he specially treats." The extraordinary advances in the past two decades, both in the surgery of peripheral vascular disorders and more recently in the surgery of major blood vessels, have made it necessary for the surgeon whose prime interest is in the furtherance of the vascular field to limit his activities in order to remain productive. The more difficult and laborious the investigative techniques, whether diagnostic or therapeutic, the more sharply must the investigative surgeon limit his professional activities.

Specialization, however, must be subject to close scrutiny since there is always the danger of losing sight of the patient as a whole. It has been said that "the specialist should be a trained physician, a skilled surgeon, and something more, but he is often something else—and something less." Too much emphasis cannot be placed on the necessity for a thorough grounding in the basic sciences, medicine, and general surgery before the individual can devote his time exclusively to vascular surgery.

In conclusion it may be well again to quote from the classic paper of Harvey Cushing. "The surgical specialties . . . should represent merely grafts on the parent stem, for in their cultivation as separate plants they may cease to blossom and to bear fruit. . . . When progress ceases to be made, through the intensive studies which the smaller field of work permits, there is every reason why the vagrant specialty should be called back under the wing of its parent, general surgery, from whom in no circumstances should it ever be permitted to wander too far."

REFERENCES

1. Cushing H. Lancet, 2:369 (Aug. 9), 1913. I. S. Ravdin, Professor of Surgery at University of Pennsylvania Medical School recently called attention to this article.
2. Halsted, Bull. John Hopkins Hospital, 23:191, 1912.
3. Lister, J., Edinburg M. J., 21:481, 1875.
4. Matas, R., in Keen's Surgery, Vol. 5, Philadelphia and London, W. B. Saunders Company, 1909.



That Dodo Again

Without belaboring our dear dead friend the dodo, may we make one more reference to him in connection with the drive for compulsory health insurance. The simile is wearing a little thin by now and the latest blast from a high place should prove conclusively that the politically-inspired movement to execute a system of compulsory health insurance is far from the condition of death attributed to our erstwhile feathered companion.

Latest in the string of dignitaries to espouse compulsory health insurance is Bernard Baruch, elder statesman, philanthropist, counsel to presidents, benefactor of the medical arts, and the son of a physician. Speaking before a meeting of six hundred doctors in New York, Mr. Baruch pleaded for medical participation in the plan to enact a compulsory health insurance law. He cited the rejection of four million potential draftees as a shocking situation, declared that voluntary health insurance "is not good enough," stated that a "sizable segment of society does not earn enough to pay for voluntary insurance" and concluded that a national scheme of compulsory health insurance was the only answer. Mr. Baruch urged the doctors to get behind this movement, rather than stand on the sidelines while it developed. He said that a form of compulsory health insurance can be devised "without the Government taking over medicine, something which I would fiercely oppose."

Coming from such an eminent citizen as Mr. Baruch, these statements carry more weight than from the lips of a known government-employee propagandizer. The same fallacies attend such remarks in either case, but the prominence of the speaker lends extra weight to them in the public mind. Apparently Mr. Baruch has been taken in by the same type of propaganda which the President and his predecessor backed and which has been traced to its birthplace by a vigilant congressional committee.

Medical men and students of the movement for compulsory health insurance laws are aware of the fallacies of these oft-repeated arguments. They know the meaninglessness of the draft rejection figures. They know that Government would surely "take over medicine" if a compulsory health insurance law were adopted. They know that the voluntary systems of medical care insurance are within and not beyond the means of the ordinary wage-earner. They know that the idealistic propaganda of Messrs. Falk & Co. is studded with inaccuracies, misstatements and glossy covers for regimentation. The surprising part of it all is that Mr. Baruch, familiar with the ways of bureaucrats, should be taken in by this sort of program.

The only answer which immediately comes to mind on that point is that in his role of presidential adviser Mr. Baruch is bound to repeat the same arguments that our latest two chief executives have received from inspired sources. At the same time, he has hedged these arguments somewhat in deploring a political takeover of medicine; this may be a straw in the wind as to new techniques by the social planners.

Agitation for compulsory health insurance may be, as some medical men claim it is, as dead as a dodo. After looking at Mr. Baruch's latest contribution, we venture again to question that assertion.

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NOTICES AND REPORTS

Prepaid Medical Care Plans Likely to Increase in Importance When "Recession" Comes

According to the American Hospital Association, more indigents and semi-indigents are seeking hospitalization and fewer supposedly solvent persons are paying their hospital bills.

The Institute of Life Insurance reports that the consuming public is now going into debt twice as fast as ever before.

These items published in a recent issue of "Medical Economics" may or may not be harbingers of the much feared "bust"—but no harm would come from assuming that they were. For, no matter what it is called—"bust," "recession," "depression" or "economic adjustment"—the medical profession will feel its effects first. In the average household "time payments" have a higher priority than the doctor's bill. The new car or the quick freezer bought "on time" will be repossessed if not paid for on time—but the doctor's bill can be put aside for better days.

It would not be wise, accordingly, for the physician to disregard any sign pointing to a tightening economic condition. Today, before it is too late, he should look to his credits and check up on his collections with the same care that a bank would give them, under similar circumstances. And perhaps now might be the right time to reappraise the value of medically sponsored prepayment care plans as a protection against loss of income.

In boom times we know that the best fees that the plans can offer *look* modest indeed, when measured against the rich potential of the bulging consumer pocketbook. But when the consumer's cash reserves are gone and he is living from pay check to pay check (as many salaried workers are today), the scheduled fees are not so bad—not so bad from several angles.

In the first place the plans are usually in a better cash position during a period of falling prices than they ever are during a period of inflation. Their ability to pay higher fees is enhanced accordingly.

Another factor to be considered is the rapid increase in medical indigency when depression takes hold. A larger percentage of the physician's patients will be unable to pay for medical care. Membership in prepayment plans may fall off, too, when public income is curtailed—but the more responsible residents of every community *who are members of prepayment plans* will retain their membership despite curtailment of income. Pride, prestige in the community and common sense all act toward the retention of medical care protection in a time of economic uncertainty. If the emergency is severe the physician will find the people who have kept their medical care coverage the most desirable of patients. They will not require fourth notices of balances due, for example.

These factors concern the physician as an individual. There is another that will affect the profession as a whole. It is the effect that a depression will have upon the sponsors of political medical care schemes.

If a larger portion of the population becomes medically indigent, a hue and cry for an emergency control bill can be expected. It might even be attached as a rider to a general relief measure. And, if proposed, it will have an excellent chance of passing. Certainly the indigents would not oppose it. The organized labor group would most certainly support it. As an alternative to serving many without compensation, even some of the physicians might vote for it.

The danger of such emergency legislation is not in its intent, of course, but in its slap-bang construction. Normally it does not receive adequate debate. Under the pressure of need it is usually rushed through without full determination of its fitness to do the job. It frequently contains implications that can be exploited and bugs that cannot be eliminated. Moreover, it is most unlikely that the fees paid to physicians under it would be higher than those paid by existing medically sponsored plans.

Why then invite the risks of such legislation?

Why not, instead, implement the existing plans to act as contractors to the Government for medical care—in times of emergency and all the time?

In California we have the precedent of the Veterans' Administration-C.P.S. Program, under which C.P.S. as a private contractor undertakes to deliver medical care to a mass of the citizenry. A similar program with the proper Government agency could be adapted to cover certified medical indigents. The idea is worth thought and discussion. It would certainly be preferable to contract with the Government than to be dragooned *by* the Government, in the name of emergency, into a political agreement that might place the freedom of American medicine in jeopardy. Of course a contract assumes the ability of both parties to it to meet its terms. With the understanding and support of the profession, the existing prepayment plans within their areas could deliver medical care as needed—and do it in accordance with the established ethics and practices of the medical profession.

The profession has an opportunity to display real leadership here—but it must act in unity and act positively. The American public will listen to the profession—if it speaks. It it doesn't, the public will listen to the politicians—who, by the way, have largely monopolized the floor to date. But the scales can be redressed very rapidly if the physician will take advantage of his unique position to talk to his patients and friends about the mutually important matter of medical economics.

If an economic emergency develops, it is inevitable that the Government will be called upon to develop ways and means of providing medical care to the people who can no longer pay for it themselves. Let the profession be forehanded then. Let it make a proposal of its own—a proposal that will reflect affirmatively the dignity of a group of freemen discharging its obligations to the Nation.

Such a proposal can be built upon the extended use of the medically sponsored prepayment plans as contractors to the Government.

C.M.A. Statement on Hospitalization

In the minutes of the C.M.A. Council meeting of September 20-21, 1947, reference was made to a statement adopted by the Council following issuance of a pamphlet entitled "Survey of Hospital Facilities in California—Preliminary Report" issued by the Governor's Advisory Council on Hospital Facilities. These minutes appeared on page 341 of the October, 1947, issue of CALIFORNIA MEDICINE.

In response to requests from several sources, there is given below a copy of this statement, which, together with a covering letter, was forwarded to all members of the Governor's Advisory Council on Hospital Facilities. The covering letter went to all members of this Council with the hope expressed that later reports to be issued by the Council might give full weight to the C.M.A. Council statement. This statement follows:

"Statement of the California Medical Association Regarding 'Preliminary Report' of the Governor's Advisory Council on Hospital Facilities

"The California Medical Association is keenly desirous of increasing the number of hospital beds in the State of California and of developing adequate convalescent and geriatric bed facilities. To that end its members and committees have worked for many years. The Association recognizes that hospitals are an essential part of the care of major illness, notably illness involving surgical procedures. The association does not believe that hospitals were or are designed to furnish medical services. A hospital has no diagnostic or therapeutic facilities to offer; only a duly licensed physician and surgeon has such.

"There recently appeared a 'Preliminary Report of a Hospital Survey in California' (dated May, 1947, and issued in July of that year). This report contains several statements not consistent with the above. For example, on page 15 appears the following: 'The public is coming to view the hospital . . . as a center from which all types of medical service —preventive, diagnostic and curative—should be made available.' On page 11 the report stresses that 'A hospital is the logical place to refer patients for most types of diagnostic procedures, particularly those of a complicated nature . . . when local conditions are favorable, diagnostic clinics should be established . . .' Again, on page 27 under the heading 'Expansion of Uses of Hospital Diagnostic Facilities' appears the sentence 'Ideally, it would appear that the hospital is the logical place to refer patients for all types of diagnostic procedures.'

"The primary function of the hospital is to furnish bed, board and nursing care to sick persons. Outpatient departments are necessary adjuncts to large teaching institutions, but not essential for the primary functions of the ordinary private hospital. The California Medical Association disapproves the suggestion that ambulatory patients should be referred to hospitals for diagnostic procedures, especially when so many general practitioners, internists, radiologists, pathologists and other physicians maintain well equipped offices in which the vast majority of these procedures may be performed. The diagnosis and treatment of disease is a medical function to be performed by physicians. Since approximately 85 per cent of illness does not require hospitalization, it is obviously not to the interest of the public to have the added expense of a hospital institution when such is unnecessary. The doctor's office is the

logical place to refer patients for diagnostic or therapeutic procedures.

"In summary, the California Medical Association wishes to emphasize that medical procedures performed in hospital buildings are in no wise different from medical procedures performed in medical office buildings. They are medical services, not hospital services. Any statement of policy to the contrary is not founded on fact and does not tend to the public welfare. It is the hope of the C.M.A. that the final report of the Governor's Advisory Council on Hospital Facilities will lead to the provision of needed additional hospital beds in a manner consistent with sound professional practice, and the maintenance of cordial relationships between physicians, hospitals and other elements in the healing arts professions."

Minutes of Executive Committee Meeting

Tentative Draft: Minutes of the 205th Meeting of the Executive Committee, San Francisco, November 9, 1947.

The meeting was called to order by Chairman Sidney J. Shipman at the Saint Francis Hotel, San Francisco, at 11 a.m.

1. Roll Call:

Present were: Chairman Shipman, Council Chairman Edwin L. Bruck, President-Elect E. Vincent Askey, Speaker L. A. Alesen, and by invitation, Councilmen John W. Green, H. Gordon MacLean, Frank A. MacDonald, R. Stanley Kneeshaw, Donald D. Lum. The Executive and Finance Committees of C.P.S., Doctors Donald Cass, H. Randall Madeley, C. L. Cooley, and Robertson Ward, Rt. Rev. Msgr. T. J. O'Dwyer, and Mr. Ransom M. Cook, Mr. William Bowman, Mr. Paolini, Legal Counsel Howard Hassard, C.M.A. Assistant Eexecutive Secretary William P. Wheeler and Miss Harcourt of C.P.S.

Absent: President John W. Cline, Secretary L. Henry Garland (ex officio), Editor Dwight L. Wilbur (ex officio).

Chairman Shipman turned the meeting over to the members of the Executive and Finance Committees of the C.P.S. and Doctor Robertson Ward presented the opening statements and reasons for the meeting. Due to numerous questions C.P.S. felt that it would be beneficial to the membership of the C.M.A. if the over-all financial condition of the C.P.S. were discussed fully.

Rt. Rev. Msgr. O'Dwyer and Mr. Hassard discussed the background and the events leading up to present day activities of C.P.S. and stressed the need of closer cooperation between C.P.S. and the physician membership.

Mr. Bowman distributed financial statements for the six months ended September 30, 1947, and, with assistance by independent accountants of C.P.S., explained each phase of the accounts. After discussion it was moved by Bruck, seconded by Alesen, and carried, that the complete financial report of C.P.S. be sent with a covering letter of explanation to all county medical societies.

Mr. Ransom M. Cook, assistant secretary and treasurer of C.P.S., discussed the over-all financial position and proposed a plan for placing C.P.S. finances on a current cash basis. He presented the advantages and disadvantages of having a larger surplus in future C.P.S. operations.

Doctor Ward, treasurer, explained the recent actions taken by the Board of Trustees to improve the financial position and operations of C.P.S.

Doctor Cass gave a report on the Joint Control Committee in Southern California, established by C.P.S. and Hospital Service of Southern California.

A general discussion followed, relative to the expansion of C.P.S. and other prepayment plans.

Meeting adjourned at 2:45 p.m.

In Memoriam

ASHKIN, HYMAN. Died May 27, 1947, age 44. Graduate of the Rochester Eclectic Medical College, New York, 1928. Licensed in California in 1938. Doctor Ashkin was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

✣

CARPENTER, HARRY L. Died in Richmond, August 18, 1947, age 72, of coronary thrombosis. Graduate of the College of Physicians and Surgeons of San Francisco, 1904. Licensed in California in 1909. Doctor Carpenter was a retired member of the Contra Costa County Medical Society, the California Medical Association, and an affiliate Fellow of the American Medical Association.

✣

CRISP, NAZARETH JOHN. Died in Benicia, August 26, 1947, age 54, of acute congestive heart failure and polycythemia. Graduate of the College of Medical Evangelists, Loma Linda-Los Angeles, 1925. Licensed in California in 1925. Doctor Crisp was a member of the Solano County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

✣

FALK, CHARLES CLIFFORD, SR. Died in Eureka, November 15, 1947, age 75. Graduate of Cooper Medical College, San Francisco, 1897. Licensed in California in 1898. Doctor Falk was a member of the Humboldt County Medical Society, the California Medical Association, and the American Medical Association.

✣

FINSAND, VICTOR. Died in San Francisco, November 3, 1947, age 59, after a short illness. Graduate of the University of Illinois College of Medicine, Chicago, 1916. Licensed in California in 1922. Doctor Finsand was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

✣

HAUSER, RUPERT VAN ALSTYNE, JR. Died August 8, 1947, age 34, when the airplane he was piloting crashed at Fauts Springs. Graduate Stanford University School of Medicine,

Stanford University-San Francisco, 1938. Licensed in California in 1938. Doctor Hauser was a member of the Humboldt County Medical Society, the California Medical Association, and the American Medical Association.

✤

Hiller, Albert William. Died in Long Beach, July 28, 1947, age 68, of carcinoma of the esophagus. Graduate of the University of Southern California School of Medicine, Los Angeles, 1909. Licensed in California in 1909. Doctor Hiller was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

✤

Laugeson, Lyder Laurita. Died in San Diego, November 11, 1947, age 44. Graduate of the University of Minnesota Medical School, Minneapolis, 1929. Licensed in California in 1934. Doctor Laugeson was a member of the San Diego County Medical Society, the California Medical Association, and the American Medical Association.

✤

Oliver, Alfred Shelton, Jr. Died in Imola, November 24, 1947, age 66, of a stroke. Graduate of Rush Medical College, Illinois, 1905. Licensed in California in 1934. Doctor Oliver was a member of the Napa County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

✤

Reynolds, Nathan Oyler. Died in Los Angeles, November 11, 1947, age 56. Graduate of Creighton University School of Medicine, Omaha, Nebraska, 1912. Licensed in California in 1919. Doctor Reynolds was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

Rooney, Charles Edward. Died in Santa Monica, November 1, 1947, age 66, after a long illness. Graduate of Creighton University School of Medicine, Omaha, Nebraska, 1905. Licensed in California in 1922. Doctor Rooney was a Retired member of the Los Angeles County Medical Association, and the California Medical Association.

✤

Sawyer, Frank Everett. Died in Berkeley, October 16, 1947, age 73. Graduate of Cooper Medical College, San Francisco, 1900. Licensed in California in 1900. Doctor Sawyer was a Retired member of the Alameda County Medical Association, the California Medical Association, and an Affiliate Fellow of the American Medical Association.

✤

Thompson, Elmer Harmon. Died in Burbank, November 4, 1947, age 69, of a heart attack. Graduate of Rush Medical College, Illinois, 1903. Licensed in California in 1905. Doctor Thompson was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

✤

Weeks, Alanson. Died in San Francisco, November 25, 1947, age 70, of a heart attack that followed a slight attack of pneumonia. Graduate of the University of Michigan Medical School, Ann Arbor, 1899. Licensed in California in 1900. Doctor Weeks was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

✤

Zook, Abraham James. Died in Burbank, November 1, 1947, age 75. Graduate of Rush Medical College, Illinois, 1897. Licensed in California in 1923. Doctor Zook was a Retired member of the Los Angeles County Medical Association, the California Medical Association, and an Affiliate Fellow of the American Medical Association.

NEWS and NOTES

NATIONAL • STATE • COUNTY

IMPERIAL

Dr. Burke E. Schoensee recently became health officer of Imperial County, taking the place of Dr. E. H. Benson.

KERN

Dr. Frederick O. Wynia of Bakersfield, formerly secretary of Kern County Medical Society, has been elected president for 1948 to succeed Dr. William H. MacDonald. Dr. John J. Cawley of Bakersfield was elected secretary.

KINGS

Dr. Paul Murphy has been appointed acting health officer of Kings County to fill the vacancy caused by the death of Dr. Ernest E. Foster.

LOS ANGELES

Dr. Louis E. Martin was elected president of Los Angeles County Tuberculosis and Health Association to succeed Dr. Reginald H. Smart, who now becomes first vice-president. Dr. Martin has also been made president of the California Tuberculosis and Health Association.

Officers of the Los Angeles County branch of the American Cancer Society, recently elected for the coming year are Edward Mills, president; Dr. Alvin G. Foord, vice-president; John R. Christie, secretary-treasurer; Mrs. Paul C. Blaisdell, county commander, and Dr. William E. Costolow, chairman of the executive committee.

SAN BERNARDINO

San Bernardino County Medical Society has elected Dr. Meredith G. Beaver of Redlands to the presidency of the society for the 1948 term. He succeeds Dr. Marcus D. White of Ontario. Dr. Carl M. Hadley was reelected secretary.

SAN DIEGO

Dr. Robert J. Prentiss, San Diego, last month was elected president of San Diego County Medical Society for 1948 and Dr. W. H. Geistweit was reelected secretary. Retiring president is Dr. F. E. Jacobs.

Admitting paying patients (except those who have tuberculosis) to the San Diego County Hospital was opposed in a recent communication by W. W. Johnson, president of the Hospital Council, to the Board of Supervisors. Mr. Johnson contended there is no shortage of beds in private hospitals in the county. He opposed plans to expand the County Hospital, saying that it would be unnecessary if private, tax-paying hospitals were given full support by patients able to pay.

SAN FRANCISCO

Eight 1948 postgraduate courses for qualified physicians have been announced by the University of California Medical School, San Francisco. The courses and the dates they begin and end are as follows: Orthopedic Surgery, February 9 through 13; Hematology and Blood Disorders, February 16 through 19; Internal Medicine and General Surgery, June 21 through 25; Cytological Diagnosis of Cancer by Smear Technique, June 21 through July 2; Pediatrics, June 28 through July 2; Ophthalmology, September 6 through 10; General Medicine, evening lectures, two hours every Monday, 12 weeks, September to December, to be announced; Psychiatry and Neurology, full-time course, 12 weeks, September to December, to be announced. Details may be had from Stacy R. Mettier, M.D., Head of Postgraduate Instruction, Medical Extension, U. C. Medical Center, San Francisco 22.

Dr. Robertson Ward, who last year was secretary-treasurer of the San Francisco County Medical Society, has been elected president for 1948, succeeding Dr. Anthony P. Diepenbrock, and Dr. M. Laurence Montgomery has become secretary-treasurer. Dr. Dorothy W. Atkinson has succeeded Dr. Lois H. Brock as vice-president. Dr. Forrest M. Willett was elected second vice-president and Dr. Martin W. Debenham, Librarian.

A scientific program was presented at the first annual meeting of the Western Society of Clinical Research, held in San Francisco on November 7 and 8, 1947, and the following officers were elected for the coming year: President, Mayo Soley, M.D., San Francisco; vice-president, Myron Prinzmetal, M.D., Los Angeles; secretary-treasurer, Helen Martin, M.D., Los Angeles; Council, Paul Aggeler, M.D., San Francisco, Norman David, M.D., Portland, Daniel Green, M.D., Seattle, Hans Hecht, M.D., Salt Lake City, John E. Peterson, M.D., Los Angeles, Lowell Rantz, M.D., San Francisco.

Dr. Joseph C. Solomon, assistant clinical professor of psychiatry, University of California Medical School, and Dr. Knox H. Finley recently were appointed as consultants to the Surgeon General of the Army. Reappointed as consultants were Dr. Karl M. Bowman, superintendent and medical director of Langley Porter Clinic; Dr. George S. Johnson, Stanford University Hospital; Dr. Nathan Malamud, Langley Porter Clinic; Dr. Alexander Simon, University of California Medical School and Drs. Norman Reider and Emanuel Windholz of Mt. Zion Hospital.

SAN JOAQUIN

San Joaquin County Medical Society's president for 1948 is Dr. E. A. Holley of Stockton who was elected to succeed Dr. Dora Ames Lee in that post. Dr. H. D. Chope, Stockton, was reelected secretary.

SAN LUIS OBISPO

Dr. Robert O. Pearman of San Luis Obispo has been elected president of San Luis Obispo County Medical Society and Dr. G. David Kelker has been reelected secretary for 1948. Dr. Pearman succeeds Dr. H. N. Cookson of Arroyo Grande.

SAN MATEO

Dr. Harold Marks is scheduled to become health director of San Mateo County, succeeding Dr. Charles C. Gans who resigned late last year. Dr. Gans is reported to have accepted apointment as Health Officer of Santa Cruz County.

SANTA CRUZ

Dr. Philip K. Gilman, Jr., of Watsonville recently was elected president of the Santa Cruz County Medical Society and Dr. Samuel B. Randall, Santa Cruz, was reelected secretary. Dr. Luther Newhall, Jr., is the retiring president.

SONOMA

Appointment of Dr. Owen F. Thomas as county pathologist to fill a vacancy created by the resignation of Dr. Robert L. Dennis several months ago, has been announced by the Sonoma County Board of Supervisors, Dr. Thomas formerly was a member of the staff of Baylor University Hospital, Dallas, Texas.

TULARE

Dr. L. L. Selligman of Dinuba was named honorary president of the Tulare County Tuberculosis and Health Association at a recent meeting of the association's board of directors.

YOLO

Dr. John O'Hara and Dr. Henrick Graeser, both of Woodland, last month were elected president and secretary, respectively, of the Yolo County Medical Society for the 1948 term. They succeeded Dr. Max Waters and Dr. Emery Leivers.

GENERAL

Urgent need for a number of **Medical Officers for duty in the Panama Canal Zone** is announced by the Panama Canal Washington Office. Starting salaries are $5,187 and $6,127.50 a year, depending upon length of experience. Candidates for positions must be graduates of approved medical schools and American citizens not over 45 years of age. (The age limit is waived up to 62 years for persons entitled to veterans' preference.) Full particulars and application forms are available from Chief of Office, Panama Canal, Washington 25, D. C.

Enrollment of approximately 40,000 **new student nurses** in the nation's 1,227 schools of nursing during 1947, a peacetime record, was indicated at a recent meeting of the Student Nurse Recruitment Committee in Chicago. The estimate was made by representatives of the National Committee on Careers in Nursing, American Red Cross, Advertising Council, American Medical Association, American College of Surgeons and the American Hospital Association. Determined from surveys conducted by the committee during the 1947 campaign, the 40,000 estimate indicates an increase of 1,900 over the previous peacetime high in 1940, and is 9,000 over the 1946 total. Goal for the 1948 campaign will be 50,000 new nursing students, the committee announced.

The Pacific Coast Obstetrical and Gynecological Society announces that the Second Annual Frank W. Lynch Memorial Essay Contest will be held during the coming year. It is open to men who have been in practice for less than ten years or who have not been certified by the American Board of Obstetrics and Gynecology. Any topic may be selected in the obstetrical or gynecological field and essays may cover either clinical investigations or laboratory research.

The First Essay Contest was won by Dr. Maurice V. Sheets, of Los Angeles, with a study of "Usual and Unusual Findings of the Cervix Uteri." This will be published shortly in the *Western Journal of Surgery, Obstetrics and Gynecology*. The prize for the best essay submitted is $100 and the privilege of presenting the paper at the next meeting of the Pacific Coast Obstetrical and Gynecological Society which will be held in Southern California during the latter part of October or early in November. Essays should be in the hands of the secretary of the society, R. Glenn Craig, M.D., 490 Post Street, San Francisco 2, by August 1.

Vaccination of all female dairy calves in California with "strain 19" **brucellosis** vaccine is being undertaken by the State Department of Agriculture. The action is being taken under laws passed for the control of brucellosis by the 1947 Legislature. Besides mandatory vaccination of female dairy calves, the law provides for optional vaccination of male dairy calves and beef calves. Aim of the program is to develop resistant stock for future herds so that brucellosis in cattle may be gradually eliminated.

Granting of two new **fellowships for research in ophthalmology** to the medical schools of Harvard and Yale was announced recently by the Eye-Bank for Sight Restoration, Inc. Recipients of fellowships will devote themselves chiefly to problems related to the cornea. One of the principal objectives of research at present is the discovery of a method for the preservation of corneal tissue for a period longer than 72 hours.

The Research Fellows are Dr. Thomas Duane, who will work at the Howe Laboratory of Harvard University Medical School to investigate the metabolism of the cornea under various conditions of storage, and Dr. David Freeman, who will work at the Yale University School of Medicine to determine whether embryonic tissues can be grafted upon members of the same species and upon other species.

Dr. Arthur W. Allen, president of the **American College of Surgeons**, announces the scheduling of six section meetings in 1948, for fellows of the college,

the medical profession at large, and hospital personnel. Each meeting will be two days in length and will include conferences for hospital personnel as well as sessions for the medical profession. The showing of medical motion pictures will begin each day's program at 8:30 a.m. There will be luncheon meetings each day and a dinner meeting on the first evening. The latter will be followed by a symposium on cancer. Panel discussions on scientific subjects, led by internationally known authorities in each field of surgery, will be held each morning and afternoon. The list of meetings follows: Toledo, January 20-21; Atlanta, January 26-27; Oklahoma City, January 30-31; Denver, March 1 and 2; Minneapolis, March 15-16; Halifax, May 17-18.

The Eighth Annual **Essay Contest** of the Mississippi Valley Medical Society will be held in 1948. The society will offer a cash prize of $100, a gold medal, and a certificate of award for the best unpublished essay on any subject of general medical interest (including medical economics and education) and practical value to the general practitioner of medicine. Certificates of merit may also be granted to the physicians whose essays are rated second and third best. Contestants must be members of the American Medical Association who are residents of the United States. The winner will be invited to present his contribution before the Thirteenth Annual Meeting of the Mississippi Valley Medical Society to be held in Springfield, Illinois, September 29, 30, October 1, 1948. All contributions shall be typewritten in English in manuscript form, submitted in five copies, not to exceed 5,000 words, and must be received not later than May 1, 1948. **Further details** may be obtained from Harold Swanberg, M.D., Secretary, Mississippi Valley Medical Society, 209-224 W.C.U. Building, Quincy, Illinois.

The present three to five year **training period for nurses** should be reduced to between one and two years, Dr. Howard C. Naffziger, San Francisco, told 200 hospital superintendents and directors recently at the Conference of California Hospitals in Berkeley. The training period now is so long that hiring a trained nurse is beyond the means of most people, Dr. Naffziger said.

Appointment of Dr. Frederic M. Kriete as Chief of the Bureau of Material and Child Care has been announced by the California Department of Public Health. Dr. Kriete occupied a similar position in Utah before accepting the present appointment.

First issue of *A.D.A. Forecast*, a monthly magazine for diabetics, published under the auspices of the American Diabetes Association, is scheduled to come off the presses in the current month. Designed "to give the physician an additional aid in the treatment of his diabetic patients," according to announcement of the publication, the magazine "will serve as a monthly messenger—the doctor's messenger—delivering to the diabetic patient helpful articles by authorities in the field; basic facts on diet; and inspirational articles which will keep up the patient's courage in the rigorous routine of his disease."

The Western Section of the **American Society for the Study of Sterility** will hold a conference February 6 and 7 at Stanford University Hospital, San Francisco. Among the speakers will be Dr. John Rock, Dr. Arthur Hertig, Dr. Lewis Michelson, Dr. A. R. Abarbanel, Dr. Robert Rutherford, and Dr. L. A. Emge. Further information may be obtained from Dr. John O. Haman, 490 Post Street, San Francisco.

The National Gastroenterological Association has announced its annual cash prize award contest for 1948. One hundred dollars and a Certificate of Merit will be given for the best unpublished contribution on Gastroenterology or allied subjects. Certificates will also be awarded those physicians whose contributions are deemed worthy.

Contestants residing in the United States must be members of the American Medical Association. Those residing in foreign countries must be members of a similar organization in their own country. The winning contribution will be selected by a board of impartial judges and the award is to be made at the Annual Convention Banquet of the National Gastroenterological Association in June of 1948.

Certificates awarded to other physicians will be mailed to them. The decision of the judges will be final. The Association reserves the exclusive right of publishing the winning contribution, and those receiving certificates of merit, in its official publication.

All entries for the 1948 prize should be limited to 5,000 words, be typewritten in English, prepared in manuscript form, submitted in five copies, accompanied by an entry letter, and must be received not later than April 1, 1948. Entries should be addressed to the National Gastroenterological Association, 1819 Broadway, New York 23, N. Y.



INFORMATION

The United Public Health League

Increased federal activities in the field of compulsory health insurance in recent years have tended to focus attention on the need of medical representation in Washington. Until four years ago the only time medicine was represented in any way in Washington was when a delegation would go there from the American Medical Association or from some other body of organized medicine, generally to support or oppose a pending piece of legislation. Today there are at least three organizations maintaining regular Washington offices to represent the interests of medicine.

The first such organization to open an office in the national capital was the United Public Health League, a federation of state medical associations from the western states. Its office was inaugurated on March 14, 1944, and it has maintained a steady representation to this date.

The United Public Health League was founded in Salt Lake City on January 29, 1944, when legislative representatives from six western state medical associations got together and acted on a common urge to assure that the medical profession should be in the Washington picture. This action followed a meeting in Salt Lake City on December 11, 1943, for a discussion of the need of Washington representation. At that meeting, representatives of medical associations in eight western states tentatively agreed that an organization should be formed for this purpose. Each representative took the proposal back to his own state medical association. Six of the eight associations approved the organization and voted to participate.

Back of the original meeting lay an investigation made by the California Medical Association late in 1943, when Mr. Ben H. Read, executive secretary of the Public Health League of California, was sent to Washington for a study of the legislative picture there as it affected medicine and medical practice. He reported to the C.M.A. Council on his return that every other organization and profession of any stature in the country was represented in Washington and that many of them maintained permanent offices for the purpose of maintaining contact with members of Congress and other governmental officials. The list of representatives covered several pages in the classified telephone directory but did not include any listing for the medical profession. Mr. Read also reported that the numerous members of Congress whom he had contacted were eager for information on medicine and on medicine's point of view on proposed legislation. Their only sources of information were the medical associations of their own states or the A.M.A. None of these sources was in Washington and it was often easier for the Congressman to forget about medicine's point of view than to take the trouble to check with a distant office.

Highlighting the entire situation was the manner in which the Emergency Maternal and Infant Care (EMIC) program had been adopted by Congress as a rider to another bill. Before the medical profession knew anything about this legislation, it was a *fait accompli*. If there had been a representative of the profession on the job in Washington, the unanimous opposition of physicians to this type of bill would have been made felt during consideration of the measure, with probability that the bill could have been defeated or at least put into more acceptable form.

The western physicians who reviewed this report agreed that they should be represented in Washington and formed the United Public Health League as their vehicle for such representation.

As set up under its Constitution and By-Laws, the United Public Health League has as its members the state medical associations of the western states, each with an equal vote on the board of directors. Each member state association has one member, selected by the state association, on the League's board, and each board member has equal voting power.

Dues are set at $3 for each active member of the state association and are paid either by the state association itself or, where state constitutions are in conflict, by membership committees which operate within the state. The funds of the League are spent only for federal legislative purposes and not within any of the member states.

The League publishes a bulletin entitled "Washington Letter" which is issued at irregular intervals when there is sufficient news value to warrant. The directors have felt that, rather than attempt to meet a specific publication date, it is better to issue these letters only when they contain material that is worth while to the members. The letters are sent to lists of key physicians in each state, selected by their own state associations.

Material for these letters is assembled in Washington by Mr. James J. Boyle, Washington representative and former California pharmacist and assemblyman. Mr. Boyle has had long experience in legislative work and is well known to many of the members of Congress. Some were members of the California Legislature when he served in that body. Others he had met during that period. He works closely with Mr. Read, who originally rep-

resented the League in Washington while on a leave of absence from the Public Health League of California.

Mr. Boyle's function in Washington is to secure information on what legislation is under consideration, to keep in touch with members of Congress and federal officials, to keep the members of the League informed, through the Washington Letter, of developments in Washington, to assist physicians who are called before Congressional committees, and to serve as a two-way information center. During the hearings before the Senate Committee on Education and Labor on the Wagner-Murray-Dingell bill last year, Mr. Boyle was extremely helpful in seeing that the physicians from the western states were properly scheduled for committee appearances.

The question has been asked as to whether or not the Washington office of the United Public Health League is not in competition with the A.M.A. office there. So far the answer is that there is no competition between the two offices but a most cordial cooperation. Mr. Boyle and Doctor Joe Lawrence, the A.M.A. representative, meet regularly and exchange information of mutual benefit. Their relationships are very friendly, as are the relationships between the League and all other medical representatives in Washington.

California has been signally honored by the other member states in the League in the election each year of Doctor Dwight H. Murray as chairman of the board of directors. Doctor Lester A. Stevenson of Salt Lake City is vice-chairman and Doctor Jesse H. Hamer of Phoenix is secretary-treasurer. Mr. John Hunton, C.M.A. executive secretary, holds the same post in the United Public Health League and maintains the League's records and accounts at the C.M.A. office. The League has been operating on an annual budget of about $15,000, all of which is represented in Mr. Boyle's salary and office expenses and the incidental expenses of publishing the Washington Letter.

Encouraging to the member states in the League is the fact that the original membership of six state medical associations has grown to nine in the past four years. Original members were Arizona, California, Colorado, Idaho, Nevada and Utah. Since then the membership has been increased by the affiliation of the state medical associations in Montana, New Mexico and Wyoming. Other states have been invited to join the League and one or two non-member states have sent representatives to the annual meetings. No drive for membership has been made, the directors believing that the United Public Health League must sell itself to prospective member states. The fact that three new members have come in within the past few years is indicative of the value that these states find in the organization.

Hospitalization and Treatment of Pay Patients in County Hospitals

Following is a review of laws relating to the admission and treatment of pay patients in county hospitals in California. Prepared by Peart, Baraty and Hassard, legal counsel for the California Medical Association, it is published here because it contains answers to questions on the subject which frequently arise in many counties in the state.

1. *Admission of Pay Patients to County Hospitals:*

It has been settled in California that where private hospital facilities are not adequate to care for patients with ability to pay for service, it is permissible for the County Hospital to accept private patients and to charge them for such hospital service (Calkins vs. Newton, 36 Cal. App. (2d) 262; Goodall vs. Brite, 11 Cal. App. (2d) 540). Each of these cases considered only *hospital* service to pay patients and was not concerned with *medical* service of any kind. The Court's opinion in each case expressly stated that pay patients could be admitted to County Hospitals only where private hospital facilities were not adequate to care for the sick and injured of the community. In Goodall vs. Brite, it was expressly held that hospitalization in County Hospitals of patients who could provide themselves with care in private institutions was not a proper function of the County. An injunction was issued limiting admission to the County Hospital to certain specific classes of patients, including the indigent and dependent or partially dependent, psychopathic, emergency cases, etc. In those cases where a patient has ability to pay a part or all of the cost of hospitalization, the County is required to collect from the patient up to his ability to pay, but under the above mentioned cases, not to exceed the actual cost to the County of such hospitalization.

Therefore, if there are adequate private hospital facilities, pay patients cannot be legally admitted to the County Hospital. If there are not adequate private hospital facilities, pay patients under the law can be admitted to County Hospitals and should be charged not to exceed the cost of such hospitalization according to their ability to pay.

2. *Medical Service to Patients in the County Hospital:*

In our opinion County Hospitals under the law of this state are not permitted to engage in the medical care of private patients with ability to pay, particularly where the medical services are rendered by the visiting staff, free of charge. Under its police powers the Board of Supervisors in each county is authorized to provide for the care and maintenance of the indigent sick or dependent poor, and for that purpose the Board of Supervisors may employ physi-

cians. When, however, the County undertakes to provide medical care to patients with the ability to pay, it is our opinion that the County is acting in excess of its constitutional authority and is also engaging in the practice of medicine. If the medical services for which paying patients are charged, are rendered free of charge to the hospital by the visiting members of the hospital staff, the County Hospital is then engaging in a venture for profit. This in our opinion is in excess of the authority granted the County by the Welfare and Institutions Code, Sections 200-204. As stated in the case of Calkins vs. Newton, these sections of the code are the source of the County's authority to operate a County Hospital, and "authority to build and operate a hospital for profit is not given expressly nor by implication." In that case with regard to hospitalization service the court further said "the County can charge only the cost of the service."

Although by furnishing medical service and making a charge therefor, the County is in our opinion exceeding its police powers, to our minds by far the most important objection to such action is that the County is actually practicing medicine when it purports to make charges for medical care rendered by individual physicians. This is particularly true where the physicians are not County employees hired to care for the indigent and poor as authorized by law.

In one situation in which our opinion has been solicited, it is said that the Board of Supervisors relies on the case of Whelan vs. Bailey, involving the Public Administrator's Office. In this case, decided October 10, 1934, reported in 1 Cal. App. (2d) 334, the District Court of Appeal held that the County of San Diego could not compel the Public Administrator to employ the County Counsel and require the attorney's fees to be paid into the County Treasury in administration of estates of deceased persons. The ground of the decision was that the Public Administrator was appointed by the Court in each case to represent the estate of a deceased private individual and, the County, by furnishing counsel and collecting a fee therefor, was engaging in the practice of law. This case was, however, expressly overruled in Estate of Miller, 5 Cal. (2d) 588, decided by the State Supreme Court on March 2, 1936. There the court held that it was proper for the County to require the Public Administrator to employ the County Counsel and to require attorney's fees collected from each estate administered by the Public Administrator to be paid into the County Treasury.

In our opinion these decisions have no application to the situation at the County Hospital. The court in Estate of Miller expressly points out that the County Counsel acting as attorney for the Public Administrator, is not practicing law for the benefit of the County, but is performing an official duty for a County officer. The County is not practicing law. Where, however, a private physician renders medical service to a patient while on the visiting staff of the County Hospital he is practicing medicine and not acting as a public officer; if the County Hospital then attempts to collect a fee for the medical service rendered, it is very clearly attempting to practice medicine.

3. *Supervision by the Staff of Fees Collected:*

Of course, the opinions we have expressed above would preclude the County Hospital's collecting a fee for medical services rendered. Assuming that private hospital facilities in the county are not adequate, so that it is proper to admit pay patients to the County Hospital, it is, nevertheless, not proper in our opinion for the County Hospital to collect a fee for any medical services rendered. The physician actually rendering the service is the *only* person legally entitled to bill and collect a fee for such service. The amount of the fee is, of course, a matter solely for the consideration of the physician making the charge.

4. *Pathological, X-Ray and Laboratory Services:*

In our opinion both x-ray and pathological laboratory service are part of the practice of medicine and, therefore, the roentgenologist or pathologist rendering the service is the *only* person who may lawfully bill or collect fees for rendition of such service. In those instances where the County Hospital collects a fee for x-ray or laboratory service, we believe that the County is practicing medicine. In addition, where the hospital charges private patients a fee over and above the cost of laboratory, anesthetic or x-ray service, the County is exceeding its police powers and operating a hospital for profit.

Briefly, all bills from the County Hospital should be rendered at cost and *no bills should be rendered by the hospital for any service which constitutes the practice of medicine.*

We realize that it has been the practice in some private hospitals to include certain medical expenses in the per diem rate, and also for the hospital to bill the patient directly for certain of these services rendered by paid employees. It is our opinion, however, that this is a situation which should be corrected, as we believe it unsound both legally and ethically. Where this arrangement prevails, the hospital is unlawfully practicing medicine.

BOOK REVIEWS

DISEASES TRANSMITTED FROM ANIMALS TO MAN. By Thomas G. Hull, Ph.D., Director, The Scientific Exhibit, American Medical Association, and various contributors. Third edition. Illustrated. 1947. Charles C. Thomas, Publisher. Price $10.50.

Interest in the infections of domesticated mammals and birds and in those carried by animals and insects in nature and transmitted to man has greatly increased in recent years. With this heightened interest has come a growing appreciation of their importance in medical science. These trends, as well as significant newer knowledge accrued during the war years on the epidemiology and control of such infections, made necessary the revision of this well-known book and the issuing of a third edition. With the aid of 14 specialists and consultants in the field of comparative pathology and animal and insect ecology, the vast field has been condensed to 550 pages filled with factual data. Nearly every chapter has been revised and some have been re-written and brought up to date. Unfortunately, references in some chapters are neither recent nor well chosen.

The new chapters on "Arthropod-Borne Encephalitides and Q Fever" condense in readable form a great deal of information which is scattered in journals and publications not readily accessible to the physician. The chapters on jungle fever, typhus and Rocky Mountain spotted fevers and lymphocytic choriomeningitis, written by well-known specialists, are admirably informative. In future editions the chapter on Brucellosis should be subjected to critical review before publication. The occupational health hazard to the farmer and to his family, and the enormous economic losses caused persons engaged in animal husbandry by bovine and porcine brucellosis deserve greater emphasis. The section on "Laboratory Diagnosis" details the allergic skin test and the opsonocytophagic test without discussing the imperfections and misuse of these tests. On page 207 the statement that compulsory antirabies *treatment* of dogs "has been gaining in favor" should be corrected to read the "voluntary prophylactic vaccination of dogs" is highly recommended. The paragraph on histoplasmosis (pages 316-317) is incomplete. Recommendations regarding the prevention of endemic relapsing fever (page 394) could not effectively be carried out, since the various stages of the Ornithodoros ticks rarely remain on human clothing. As a summary reference, the symposium publication of the American Association for the Advancement of Science No. 18, 1942, should be mentioned. Despite these minor defects, this new edition should replace the old one as a much used reference book on the shelves of every private and public medical library.

SYNOPSIS OF OBSTETRICS. By Jennings C. Litzenberg, B.Sc., M.D., F.A.C.S., Professor Emeritus of Obstetrics and Gynecology, University of Minnesota Medical School. The C. V. Mosby Company, St. Louis, 1947, third edition. 416 pages, with 157 illustrations. Price $5.50.

The third edition of Litzenberg's "Synopsis" is only ten pages longer than the second edition (1943) and this slight increase in bulk results almost entirely from the insertion of a little essay on the Rh factor, written by R. W. Koucky, a Minneapolis pathologist. The format of this particular section differs considerably from that of the rest of the volume and the material is presented in a way which might well confuse the uninitiated reader. Later in the book, erythroblastosis is described in three different sections but there is no suggestion of a relationship to Rh incompatibility.

Discussion of the biologic tests for pregnancy has been enlarged somewhat to include details of the mouse, rabbit, frog and rat tests; and an endorsement of the colostrum skin test of Falls, which appeared in the second edition, has wisely been deleted. The material on analgesia and anesthesia has been expanded by adding a few quotations from periodical literature, but strangely enough any mention of local anesthesia for delivery has been omitted from this edition and one finds no reference to saddle-block spinal techniques which are now so popular in some areas. In view of the modern trend toward early ambulation postpartum, the statement that the patient "may safely sit up in a chair in a week" probably requires revision. The discussion of syphilis in pregnancy should be brought up to date, with mention of therapeutic plans which include penicillin. Similarly, there is no reference to the use of penicillin for acute mastitis.

With the exception of these minor faults, this synopsis continues to provide a sound presentation of the time honored fundamentals of obstetrics and should be most useful for refresher purposes. As in both previous editions, somewhat more space than seems necessary is devoted to subjects which the author had personally investigated, such as myomas in pregnancy, missed abortion, and ectopic gestation. Considerable paper could have been saved by reducing the excessive use of the outline form of presentation, but perhaps to some readers this would seem to be a virtue rather than a fault.

DEVELOPMENTAL DIAGNOSIS. Normal and Abnormal Child Development. By Arnold Gessell, M.D., and Catherine S. Amatruda, M.D. Second edition. Paul B. Hoeber, Inc. $7.50.

"Developmental Diagnosis" in its second edition shows a healthy growth and expansion of the subject. It is a book that every physician whose practice includes children should not only be familiar with through reading it once but he should have it at his elbow for quick reference at all times.

The book is divided into three parts and an appendix. Part one deals with the normal child and his developmental pattern, giving the details of examination and the findings at the selected periods, four weeks, sixteen weeks, and so on.

Part two is devoted to defects and deviations from the normal and includes not only the problems of the subnormal but those of convulsive disorders, blindness, deafness, precocity, the practical and pertinent problems of retardation due to environmental factors and the problems of adoption —the accurate rating of children in situational difficulties, etc.

Part three deals with the protection of early child development, diagnosis and guidance.

The appendix includes details of techniques, charts, equipment, cinematic case studies, a reading list and a chapter on professional training for developmental pediatrics.

Just as a physician cannot be an authority on the pathological unless he knows the normal in the somatic, so he cannot hope to guide the mental and emotional life unless he is familiar with its normal developmental pattern.

THE AMERICAN ILLUSTRATED MEDICAL DICTIONARY, 21st edition, W. A. Newman Dorland. W. B. Saunders Company, 1947.

Included in this edition are additions from the research and discovery of the war years, such, for example, as the specialties of tropical medicine and aviation medicine as well as the subject of antibiotics, physics and nucleonics, including radioactive isotopes. Names of numerous obsolete proprietary medicines have been deleted.

It is unfortunate that spelling of plurals of Latin and Greek words has not been included. It would be a considerable convenience, for instance, for a medical student to discover along with the derivation and definition of the word "diverticulum" that the proper plural was "diverticula."

COMMUNAL SICK CARE IN THE GERMAN GHETTO. By Jacob R. Marcus, Ph.D. The Hebrew Union College Press. 1947. Priced, $4.00.

This book will be of use to physicians interested in the history of medicine as it gives the development of the care of the sick by the Jews in the Middle Ages and compares such care with the type of service given by Christian guilds. Socialization of the care of the Jewish sick dates back to Medieval times.

The actual practice of medicine and surgery is barely mentioned. Hence the book will be of slight interest to the practicing physician.

PYE'S SURGICAL HANDICRAFT. Edited by Hamilton Bailey, F.R.C.S., Eng. Fifteenth Edition. Fully Revised with 789 Illustrations. The Williams and Wilkins Company, Baltimore. Published 1947.

The editor, Hamilton Bailey, has revised the last previous edition of three years before, with the help of over forty collaborators. A relatively small book, it covers pre- and post-operative care, radiology, general surgery, and nearly all the surgical specialties. Necessarily most of the considerations are brief, and provide only basic information for anyone not familiar with the subject. Many of the methods are at some variance with those used in this country. Penicillin and heparin are barely mentioned, dicumarol is not discussed. The book could best be recommended as a source for comparison, or for the gleaning of occasional helpful technical points.

MEDICAL JURISPRUDENCE

HOSPITALS: LIABILITY—DEGREE OF CARE

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In a case reported in 80 A.C.A. 934 (Aug. 1. 1947) an action was brought against a hospital charging negligence which resulted in the death of an eight months old baby. The complaint alleged that plaintiff and his wife caused their eight-month-old baby to be placed in the defendant hospital for the removal of a haemonglioma on the child's shoulder. At the time of performing the operation ether was administered to the child which rendered her unconscious and after her removal from the operating room she was placed in a room in which there were four or five other patients. She was placed in her crib on her abdomen with a small pillow under her and with her head and face slightly lower than her abdomen and lying on her right cheek. The mother sat at the side of the child for 15 or 20 minutes, after which the nurse in charge came into the room and ordered the mother, and the other mothers in the room, to leave while the nurses bathed the other children. When Mrs. T., the mother of the child, returned to the room a short while later she noticed that her baby was very white and that the fingernails were blue and her hands were cold, whereupon she asked the nurse's aid whether her baby was all right and was told that the baby was just sleeping from the ether, but at Mrs. T.'s insistence the nurse's aid picked up the baby and found that she was dead. Later the cause of death was determined to be atelectasis. The mother and father of the child alleged that the hospital was negligent in failing to give proper attention to the child and alleged that as a result the child was smothered. At the conclusion of the evidence offered by the mother and father, a motion for nonsuit was granted. The mother and father appealed and the District Court of Appeal reversed the judgment of nonsuit.

In reversing the judgment of nonsuit the court held that a private hospital owes its patients the duty of protection and that it was the duty of the hospital to use reasonable care and diligence in safeguarding a patient committed to its charge and that such care and diligence is measured by the capacity of the patient to care for himself. In this case the court stated that "by reason of the tender age of appellents' baby, respondent owed a higher degree of care in attending it than if she had been an adult."

Continuing, the court stated that "if the proper observation and care of the child had been maintained, its condition would have been observed and there is a possibility that its life could have been saved." The court felt that the evidence was sufficient to take the case to the jury and that the jury should have determined the question of the hospital's negligence. Therefore, they concluded that "the judgment of nonsuit should be reversed and the case re-tried with the jury determining whether the hospital had exercised the necessary degree of reasonable care under the circumstances."



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(Continued from Front Advertising Section, Page 30)

News

"Physicians Hit In Prescriptions — Many physicians, particularly in the southern part of the state, have been 'careless' in the issuance of prescriptions for narcotics and the division of narcotic enforcement has issued pointed warnings against the practice. Atty. Gen. Fred N. Howser has informed Governor Warren. . . . All ethical physicians desire to comply with the law, Howser said, but there have been many flagrant irregularities and the division has been forced to issue warnings in many cases and take drastic action in others. . . . Howser said lack of personnel, particularly pharmaceutical inspectors, has hampered the division in checking the flow of narcotics into irregular channels. However, all complaints are being turned over to available enforcement agents for action, he said." (Sacramento, Redwood City, California *Tribune*, October 10, 1947).

* * *

"Court Upholds Medical Examiners' Suspension of Dr. N. N. Rilcoff—The action of the State Board of Medical Examiners in suspending for one year the license of Dr. Nicholai N. Rilcoff, former head of the Kern County General Hospital, on charges of hiring unlicensed practitioners of medicine has been upheld by Superior Judge Frank G. Swain. . . . Dr. Rilcoff appealed to the court to set aside the ruling of the medical board, contending that he had not had a full and proper hearing and that the emergency personnel hired for the hospital had been efficient. . . . Judge Swain held that the hiring of emergency practitioners while there was a shortage of doctors during the war should have been solely for the purpose of treating emergency cases. Dr. Rilcoff was charged with 'aiding and abetting Alfred Edward Rhoden in the practice of medicine' when Rhoden was not licensed to practice in California." (Modesto, California *Bee*, October 22, 1947.)

* * *

"Doctor To Die For Fatal Abortion—Dr. Charles A. Molleur, Montreal physician, was sentenced late yesterday to be hanged for murder in the death of a 23-year-old girl on whom he performed an abortion. . . . The girl, Miss Etienne Leclerc, died in Dr. Molleur's office last February 8. . . . The short, gray-haired doctor, 63, was convicted of murder by a jury, and Justice Wilfred Lazure immediately passed the death sentence, saying 'The law leaves me no alternative.' Defense Counsel Lucien Gendron said an appeal would be filed. The murder conviction was one of the first—if not the first—in such a case in Canada's criminal courts. . . . Asked by Judge Lazure if he had anything to say before sentence was imposed, Dr. Molleur shouted: 'I'm telling you, you are wrong. You are wrong.' . . . Donning the traditional black gloves and tri-cornered hat, Judge Lazure told the physician he had had a fair trial, and added: 'Ten years ago you were acquitted before me on a charge of abortion and on that occasion I warned you against continuing such practices. You did not heed my advice. You have nobody to blame but yourself.'" (San Francisco *Chronicle*, Oct. 19, 1947.)

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42,000 MORE NURSES NEEDED TO MEET CURRENT DEMAND—HYGEIA

Almost 42,000 more nurses are needed to meet the current nursing shortage and probably at least 60,000 will be needed to meet increasing demands, according to an editorial by Morris Fishbein, M.D., in a recent issue of *Hygeia*, health magazine of the American Medical Association. As Dr. Fishbein sees it, the training of more practical nurses to take over a large part of ordinary bedside nursing may be the answer to the major portion of the problem.

Dr. Fishbein writes:

A survey made by the American Hospital Association indicates that the number of nurses necessary to supply the needs of the hospitals and the people of the United States is 360,000. Over 90,000 nurses are needed for private duty nursing in which one nurse takes care of one patient. At present almost 42,000 nurses are needed to meet the shortage that prevails; probably at least 60,000 are needed promptly to meet increasing demands that will come with new hospitals and new services for nurses.

Various reasons have been alleged to be responsible for the existing shortage. Before the war nurses worked in many instances a 12 hour day for six days a week. Now throughout much of the United States they work eight hours a day five days a week. This alone would mean almost twice as many nurses to meet the same needs.

In 1940 there were 1,226,000 hospital beds. By

(Continued on Page 42)

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42,000 MORE NURSES NEEDED TO MEET CURRENT DEMAND—HYGEIA

(Continued from Page 38)

1945 the number had increased to 1,738,000. New veterans' hospitals are in process of construction; under the Hill-Burton Act there will be many more hospital beds provided for the civilian population. In 1940 about 10 million patients entered the hospitals of the United States. In 1945, 16 million patients entered the hospitals. No doubt much of the increased demand is associated with the rapid spread of hospitalization insurance.

During 1945 a careful survey was made of medical and public opinion regarding the profession of nursing. The general belief seemed to prevail that the nursing profession is desirable but that it offers too little reward to those who practice it and too high a cost to those who need it. This is like the situation in which an irresistible force meets an immovable object. How to reconcile the two aspects of this situation is an exceedingly difficult problem.

The profession of nursing today includes far more than just taking care of the sick. Nurses have positions involving administrative responsibilities. They are concerned with education. The career of a nurse is considered suitable preparation for specialized training in physical therapy, public health and such fields as psychiatric, orthopedic, surgical and obstetric nursing. The demand for properly qualified

(Continued on Page 46

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42,000 MORE NURSES NEEDED TO MEET CURRENT DEMAND—HYGEIA

(Continued from Page 42)

nurses is so great that a girl who completes her education in nursing need never be without work once she has secured a license to practice.

The suggestion has been made that the shortage be overcome by the training of male nurses, but the point of view is well established that nursing is primarily a woman's profession. Competition from men will hardly be a factor for a good many years.

The minimum educational requirements of most schools of nursing is graduation from high school. Some nursing schools require one or more years of college work. In general students are admitted only when they have been in the upper third of the class. The preferred age is 20 to 25 years but 18 years of age is considered acceptable in a good many schools. Thirty-five is considered the upper limit. Some schools of nursing offer a combination four or five year program which includes a diploma for nursing and a college degree. These schools will admit high school graduates at 17 years of age.

The great number of nurses who get married soon after entering the profession is an indication that this is one profession which is excellent preparation for marriage. The girl who is trained as a nurse has several advantages over girls in other occupations when it comes to contact with the susceptible male.

Much discussion has been going on in medical and

(Continued on Page 54)

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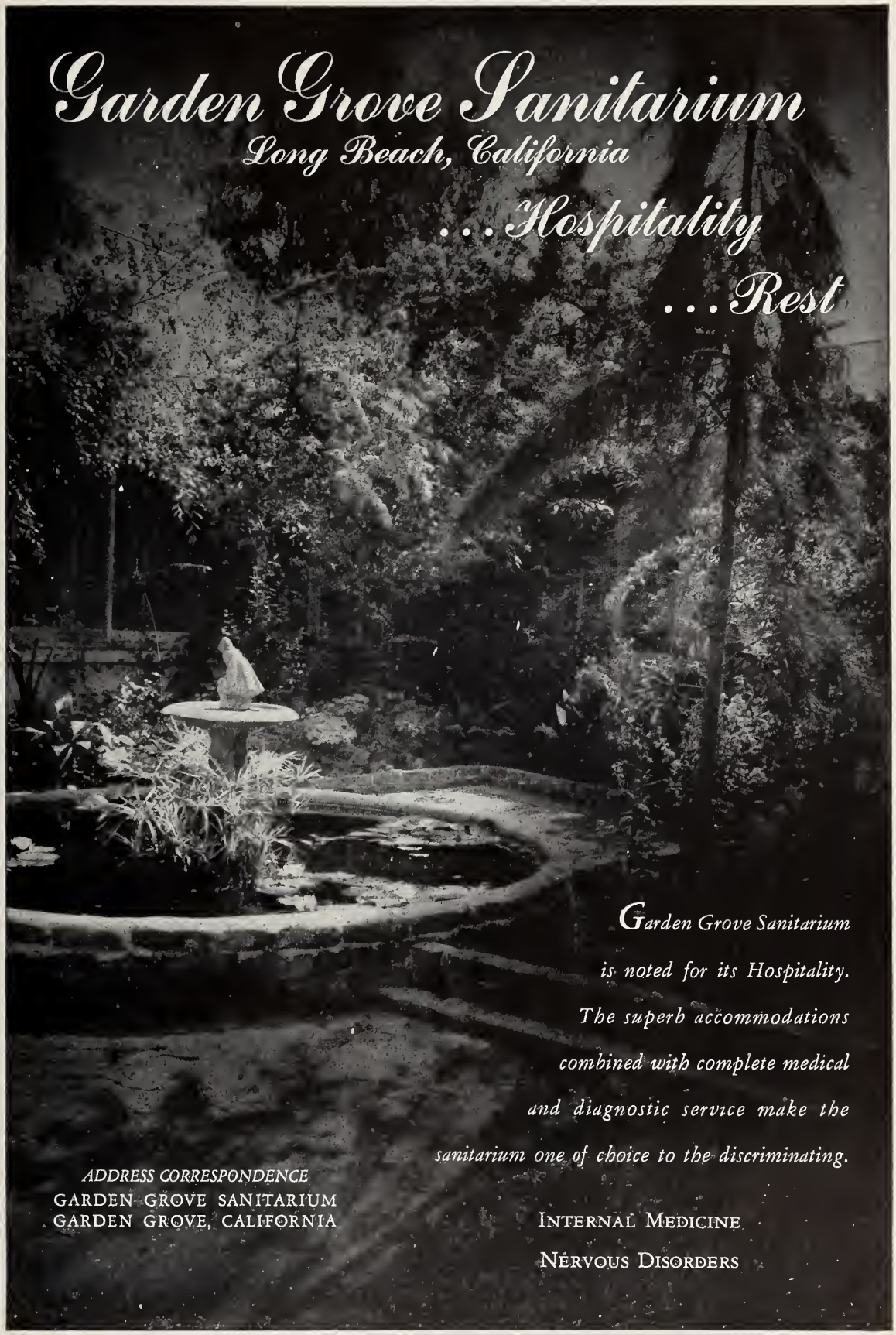
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Human hyperimmune serum or globulin is more effective than rabbit immune serum and should be used in the treatment of all infants who are seriously ill with whooping cough, according to a study made at the Willard Parker Hospital of the Department of Hospitals in New York. Jerome L. Kohn, M.D., Gittel Rudel, M.D., Lillian Buxbaum, B.S., Alfred E. Fischer, M.D., Catherine Lodyjensky, M.D., New York, Manfred Weichsel, M.D., of Long Island City and Dorothea H. Guinther, M.D., Cranford, N. J., are the authors. This paper appears in a recent issue of the *American Journal of Diseases of Children*, published by the American Medical Association.

A group of 201 young patients with whooping cough was studied. Of these, 43 received serum from human donors who had acquired immunity to the disease— immunity which is given either by inoculations with Hemophilus pertussis, an organism found in patients with whooping cough, or by recovery from the illness itself; 109 received a concentrated globulin or protein fraction extracted from this serum. These 152 were the youngest or sickest patients. The other 49 received a globulin obtained from rabbit serum.

"The subsequent condition of the infants under one year of age who received the human serum was considered improved in 70 of 79 patients, or 88.6 per cent," the article says. "The apparent response to the serum of patients over one year of age was not so striking. . . . Improvement was noted in 66.6 per cent. . . . It is conceivable that greater improvement would have occurred in the condition of these children with whooping cough had larger amounts of serum consistently been given the older patients. We were unable to do this because of the limited amount of serum available."

"A decrease in paroxysms occurred earlier in the course of whooping cough in this study than was noted in previous years," the article continues. "Emesis was less frequent. The nurses stated that during the months the serum was being administered the ward was quieter both day and night. This was especially true of the infants.

"The rabbit serum was given to 49 children, of whom only nine were under two years of age. Of this group of nine children the clinical course of the disease was considered satisfactory in only one. Even in the children of the older age group, the course of the illness was not so favorable as in those children who had been given human serum (14 children of the 40 showed improvement). . . .

"During a five year period the death rate for the infants less than one year of age under our observation who did not receive serum was . . . 4.9 to 6.7 per cent. Our data demonstrated that the mortality rate for the infants under one year who received serum [1.2 per cent] was lower than that for infants who did not receive serum."

FACULTY—Endocrine Postgraduate Assembly

The following authorities, among others, have been invited to help make up the faculty for the forthcoming Endocrine Postgraduate Assembly to be held in Los Angeles, February 23-28, 1948, under the auspices of the Association for the Study of Internal Secretions and the Journals *Endocrinology* and *Clinical Endocrinology:*

DR. EDWIN B. ASTWOOD, Research Professor of Medicine, Tufts College.

DR. J. S. L. BROWNE, Professor of Medicine, McGill University.

DR. EARL ENGLE, Professor of Anatomy, Columbia University.

DR. FREDERICK FLUHMANN, Associate Professor, Obstetrics and Gynecology, Stanford University.

DR. EDWARD HAMBLEN, Professor, Obstetrics and Gynecology, Duke University.

DR. ROY G. HOSKINS, Director, Neuro-endocrine Research, McCormick Foundation, Boston, Massachusetts.

DR. HANS LISSER, Clinical Professor of Medicine, University of California.

DR. C. N. H. LONG, Dean and Professor of Medicine, Yale University.

DR. CYRIL M. MACBRYDE, Assistant Professor of Medicine, Washington University.

DR. E. PERRY MCCULLAGH, Chief, Dept. of Endocrinology and Metabolism, Cleveland Clinic.

DR. JAMES H. MEANS, Jackson Professor of Clinical Medicine, Harvard University.

DR. WARREN O. NELSON, Professor of Anatomy, Wayne University.

DR. EDWARD RYNEARSON, Member, Section on Endocrinology and Metabolism, Mayo Clinic.

DR. HANS SELYE, Professor of Experimental Medicine, University of Montreal.

DR. M. H. SOLEY, Professor of Medicine and Assistant Dean, University of California.

DR. WILLARD O. THOMPSON, Clinical Professor of Medicine, University of Chicago.

DR. GEORGE THORN, Hershey Professor of Physic, Harvard Medical School.

DR. HENRY TURNER, Associate Professor of Medicine, University of Oklahoma.

DR. STAFFORD WARREN; Dean, School of Medicine, University of California at Los Angeles.

DR. HOWARD WEST, Professor of Medicine, University of Southern California.

Applications for the course are now being received. See other notice in this journal.



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★ BIBLIOGRAPHY
Arch. Otolaryngol., 43:605, 1946.
E., E., N., & T. Mo., 26:27, 1947.
Laryngoscope, 56:556, 1946.
New Eng. J. Med., 234:468, 1946.
Annals of Allergy, 4:33, 1946.
J. A. Ph., A., (Sc. Ed.) 35:304, 1946.
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42,000 MORE NURSES NEEDED TO MEET CURRENT DEMAND—HYGEIA

(Continued from Page 46)

nursing circles as to the desirability of educating more practical nurses. The excellent work the nurses' aides did during the war has emphasized this possibility. The criticism is made that professional nurses have raised their educational standards and are getting far away from bedside nursing. In Michigan the State Board of Education in cooperation with medical and nursing organizations has established six practical nurses' training centers to educate such nurses. For a number of years Detroit has had a similar project. These practical nurses are recruited from the senior students in high schools. The teachers are registered nurses on high school faculties. Practical nursing will be a part of the vocational educational system. Standards for practical nursing systems will be established. The leaders who are developing this plan assert that nurses of this type will be able to do from 80 to 90 per cent of the ordinary bedside nursing in hospitals. This may be the answer to the major portion of the problem.

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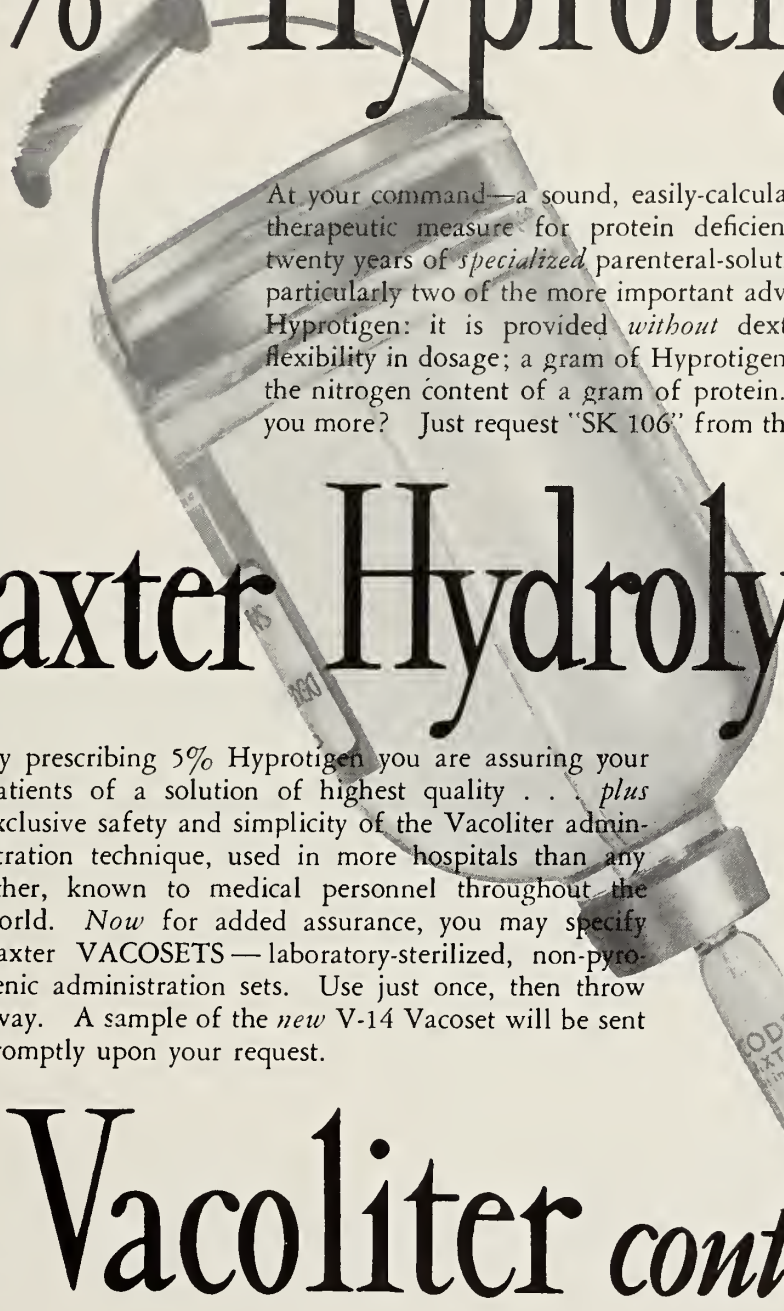
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CAUSES OF MULTIPLE SCLEROSIS STILL BAFFLE MEDICAL SCIENCE

A report on multiple sclerosis released by the National Multiple Sclerosis Society of New York, formed in 1946 for the advancement of research on what has been called "one of the most baffling and devastating diseases in existence," appears in a recent issue of *The Journal of the American Medical Association.*

Multiple sclerosis is a widely prevalent chronic disease of the central nervous system. Figures from hospital records provide little information as to its prevalence, since many patients are treated by their own physicians, but in the Eastern Health District of Baltimore between the years 1929 and 1939 there were twice as many multiple sclerosis patients as patients suffering from the after-effects of infantile paralysis.

The disease is characterized by a patchy destruction of the nervous system which occurs during recurrent attacks, usually followed by periods in which improvement is temporarily apparent. Symptoms may be present in almost every part of the body. Most characteristic, according to the report, are inflammation of the optic nerve, blurred vision, blindness limited to one part of the visual field, or weakness or numbness of one arm or leg. Also common are involuntary movements of the eyeball, tremors in the arms or hands, disturbed speech, bladder troubles and general weakness.

"Multiple sclerosis usually begins between the ages

(Continued on Page 58)

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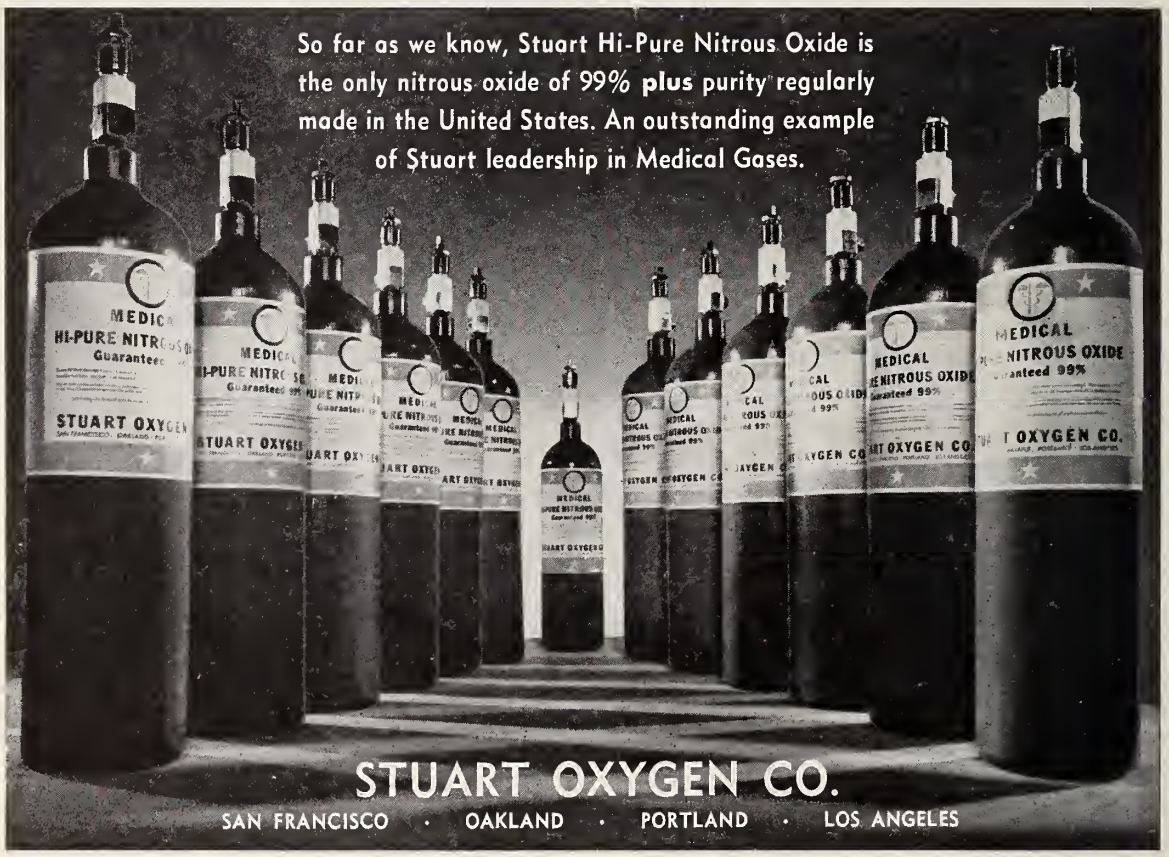
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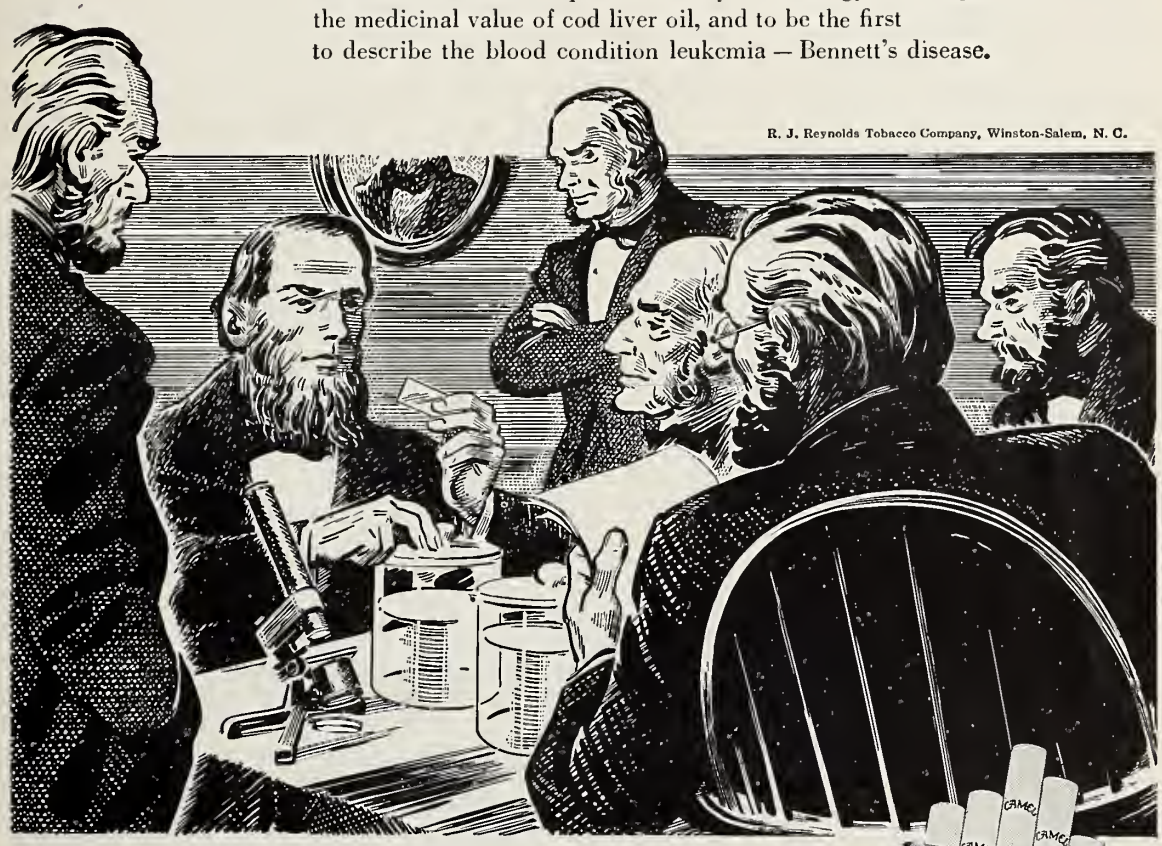


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CAUSES OF MULTIPLE SCLEROSIS STILL BAFFLE MEDICAL SCIENCE

(Continued from Page 56)

of 20 and 40 but is not excluded by an onset before or after these limits," the report states. "The symptoms are often precipitated by infection or by emotional tension or pronounced fatigue and sometimes by pregnancy, and, if so, the diagnosis is rendered more probable."

"There is no agreement among neurologists in regard to the cause of multiple sclerosis; hence, no specific treatment directed at its cause is generally accepted," the report continues. "Possibly the formation or growth of lesions might be prevented by avoiding precipitating factors or counteracting the disease process; possibly mildly damaged nerve elements might be restored by some alteration in nutrition or circulation, and certainly some long-standing symptoms may be alleviated, for example, by relaxation exercises and retraining, which obviously have no beneficial effect on the disease itself. . . .

"The physician can best serve the patient as a wise counselor who helps to relieve anxiety, to work out ways of overcoming physical handicaps and to develop positive interests which make the situation more tolerable. Since new symptoms often appear in a setting of anxiety and tension, a relief of these anxieties may help to prevent further progress of this disease."

Circumstances which may precipitate attacks should also be avoided, the report states. These are

(Continued on Page 60)



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CAUSES OF MULTIPLE SCLEROSIS STILL BAFFLE MEDICAL SCIENCE

(Continued from Page 58)

acute infections, particularly the common respiratory infections; a cold, damp climate; pregnancy; fatigue; poor nutrition; emotional disturbance; chilling, and, apparently even trifling injuries.

Muscle reeducation by means of special exercises to restore function through the development of substitute motor pathways in the central nervous system has apparently had excellent results in some cases, the report observes. Curare and neostigmine have been used in chronic cases exhibiting abnormally great muscular tension. Other drugs have occasionally appeared to give symptomatic relief, among them amphetamine, "dexedrine," "benadryl" and "pyribenzamine." Vitamins do not appear to have any specific effect on the course of the disease in well nourished patients, but may help others.

Treatment by antibiotic substances, the use of various vaccines and fever therapy—all aimed at combating possible specific infections—have largely been abandoned, the authors go on to say. The practice of sympathectomy (the cutting of the nerves which produce involuntary constriction of the blood vessels, in order to increase blood supply to the parts affected by the disease) seems to have been abandoned, too.

Other forms of treatment are still in an experimental stage, the report concludes. Accumulating evidence suggests obstruction of the blood vessels as

(Continued on Page 62)



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CAUSES OF MULTIPLE SCLEROSIS STILL BAFFLE MEDICAL SCIENCE

(Continued from Page 60)

one of the causes of multiple sclerosis. A drug called "dicumarol" keeps the blood from clotting, but has not yet definitely proved its value in treating the disease. Drugs which increase blood supply to the central nervous system seem to give transient beneficial results, but may or may not be effective as a means of long term treatment. In regard to treatment with histamine, the most powerful agent for increasing this blood supply, the Mayo Clinic reports: "Since we began this work in 1942, we have given over 55,000 intravenous histamine injections without any untoward effects." The society, however, does not believe that even this form of therapy can be adequately evaluated until more time has elapsed.

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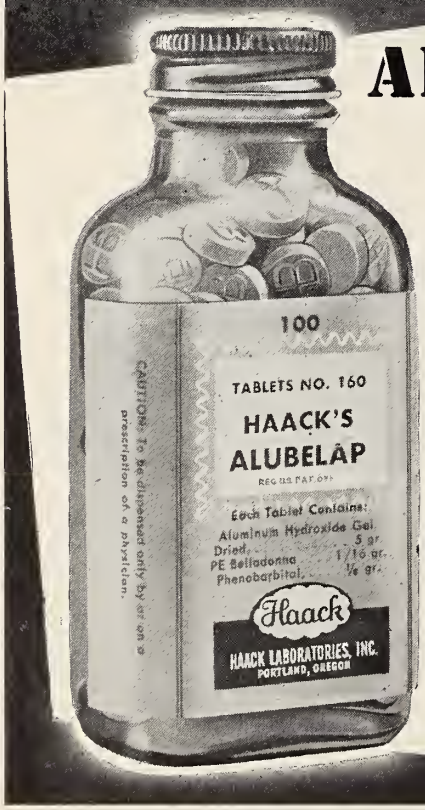
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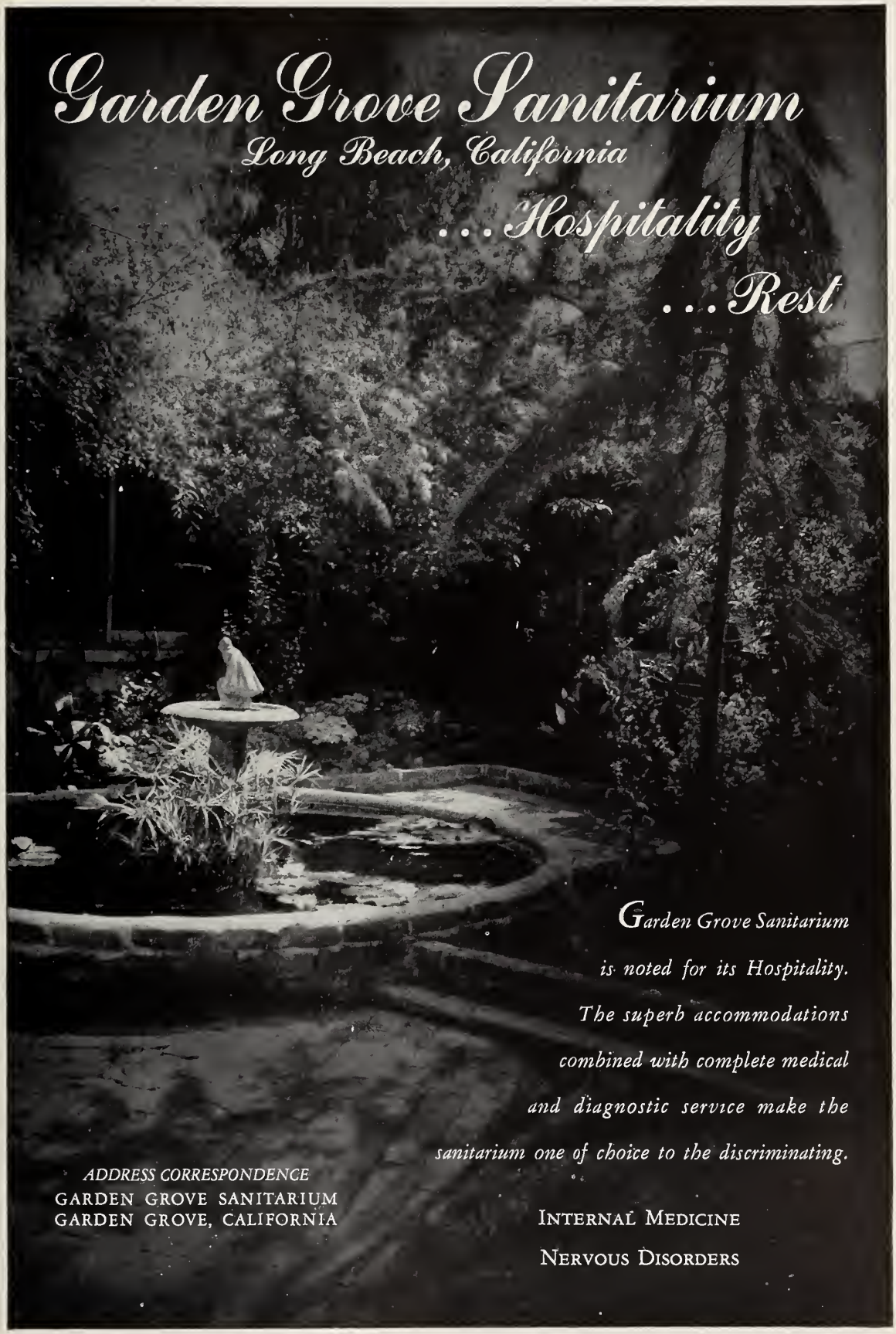
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SEVEN ORGANIZATIONS URGE NATIONAL RABIES CONTROL PROGRAM

Rabies in the United States is serious enough to justify a rabies control program on a national basis, according to representatives of seven organizations whose recommendations appear in a recent issue of *The Journal of the American Medical Association.*

The organizations are the American Public Health Association, the American Medical Association, the U. S. Public Health Service, the Bureau of Animal Industry of the U. S. Department of Agriculture, the U. S. Livestock Sanitary Association, the American Animal Hospital Association and the American Veterinary Medical Association. They believe that:

The federal government should participate in means for the control of rabies through cooperation with the states, contributing funds and personnel.

Rabies in man is generally reportable to local and state health authorities, but it should also be required that all cases of animal rabies be reported by states to a central federal agency for analysis and distribution.

Prime consideration must be given to adequate facilities for the diagnosis of rabies, mass immunization of susceptible animals, particularly dogs, and control of animals capable of transmitting the disease.

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*Based on average reported values for milk.

ORGANISM CAUSING DIPHTHERIA RESISTS PENICILLIN AND STREPTOMYCIN

In a recent issue of *The Journal of the American Medical Association* three Army doctors report the case of a diphtheria patient who was treated with large doses of penicillin and streptomycin "without apparent effect on the course of the disease or on the persistently positive throat cultures." This is significant, according to the writers, because other medical reports have indicated that the organism causing diphtheria is sensitive to both antibiotics.

With an apparent increased incidence of diphtheria in many sections of the country, in cases of severe inflammation of the throat "one should not be lured into a false sense of security" by such reports, the doctors warn. They are Lieutenant Colonel Weldon J. Walker, Captain Franklin C. Massey and Captain F. Keshvar Mostofi, all with the Medical Corps of the United States Army and all from the Medical and Laboratory Services of the Madigan General Hospital, Tacoma, Washington.

In the case they mention the patient's throat

(Continued on Page 20)

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ORGANISM CAUSING DIPHTHERIA RESISTS PENICILLIN AND STREPTOMYCIN

(Continued from Page 16)

condition was not accurately diagnosed until he grew worse after having been given large doses of penicillin. Four days after the onset of the illness throat cultures were made, and they proved positive for the bacillus of diphtheria. The patient was given diphtheria antitoxin and the penicillin dosage was continued. The cultures remained positive, however. Finally, when the patient was near death, streptomycin was given instead of penicillin. "There was no clinical or bacteriologic response to the administration of either penicillin or streptomycin," the doctors write.

"NOSE DROPS" CAUSE SYMPTOMS OFTEN MISTAKEN FOR SINUSITIS

Those who have the habit of using "nose drops" day after day are doing themselves more harm than good, says R. Wesley Wright, M.D., Palo Alto, Calif., in the recent issue of *Archives of Otolaryngology*, published by the American Medical Association.

Dr. Wright cites the cases of patients who have suffered from nasal congestion for as long as four years before discovering that the nasal drops that gave them temporary relief were actually the cause of the discomfort. Sometimes more serious conditions were found, too: loss of the sense of smell; destruction of the nasal membrane. In all the cases that he reports the nasal congestion was relieved from 24 hours to a few days after discontinuance of the

(Continued on Page 22)

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"NOSE DROPS" CAUSE SYMPTOMS OFTEN MISTAKEN FOR SINUSITIS

(Continued from Page 20)

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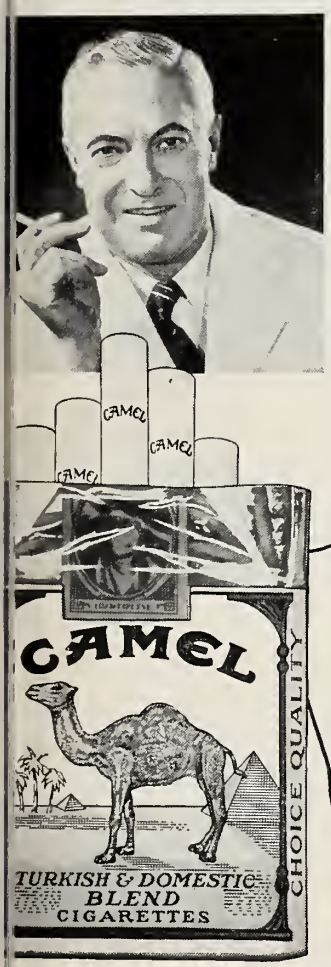
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Streptomycin is a useful adjunct in the treatment of tuberculosis. This is the conclusion of a joint clinical investigation into the effects on tuberculosis of the comparatively new antibiotic, carried on in 22 hospitals of the Veterans Administration, the Army and the Navy since June 1946. Results of the investigation are published in a recent issue of *The Journal of the American Medical Association.*

More than 900 patients with many different types of tuberculosis had been treated at the time the report was made, and 543 had completed treatment. All cases were selected by common criteria, given identical treatment and observed in the same details.

The report emphasizes that in most respects the results permit only tentative conclusions. "Many patients are still under treatment," it pointed out. "At least 1,200 more will be studied in the next 12 months. The position of streptomycin should be much clearer at the end of that time. But it is already somewhat clarified. . . . Streptomycin is a useful adjunct in the treatment of tuberculosis. Indeed, this is an understatement in the case of tuberculous meningitis, miliary tuberculosis, tuberculous sinuses and tuberculous ulcerations of the tracheobronchial tree, for an occasional patient with meningitis has survived, a high percentage of the pulmonary miliary lesions have cleared, and nearly all the sinuses and ulcers have healed.

"It may well be an overstatement in tuberculosis

(Continued on Page 30)

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The danger of the common cold lies mainly in the other infections that may follow after it. For a cold lessens your resistance, and is likely to pave the way for other, more serious, respiratory ailments.

Sinusitus, ear infections, bronchitis, and the various forms of pneumonia are frequently ushered in by a cold. Pneumonia, particularly, is likely to attack a person who is overtired, or run-down because of a severe cold.

True, many of these respiratory diseases are not as dangerous as they used to be. (Modern infection-fighting drugs—such as penicillin and the sulpha drugs—offer highly effective treatment for many cases.)

But, of course, it is always better to *prevent* a serious illness whenever possible.

If you have a cold, it's just good sense to stay away from people, to avoid spreading the infection; and to get plenty of rest—in bed if possible.

If your cold is accompanied by fever, a persistent cough, or a pain in the chest, face, or ear, call your doctor at once.

The sooner you seek his help, the more he can do to help you avoid a long and serious illness.

And, in the case of children, an early examination may disclose that what appears to be only a cold may instead be a starting symptom of an entirely different disease, such as measles or scarlet fever.

SEE YOUR DOCTOR. Never try the foolhardy experiment of dosing yourself. Your doctor's treatment of one illness may be quite different from his treatment of another illness which appears the same to you.

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STREPTOMYCIN USEFUL ADJUNCT IN TREATMENT OF TUBERCULOSIS

(Continued from Page 26)

of the genito-urinary tract or of bone and joint; in the former instance we have little knowledge though more hope; in the latter instance we have little knowledge and less hope.

"In the case of pulmonary tuberculosis, which is, after all, the main problem of the disease from a quantitative point of view, the word 'adjunct' fits well. Streptomycin does not, of itself, cure either the old fibrocavernous or the more recent exudative lesions. It does not even seem to benefit fibrocavernous disease. It does, however, in conjunction with bed rest, clear a considerable proportion of exudative disease. And in this type of pulmonary disease appears to lie its value, either as an end in itself or as a preliminary to collapse procedures.

"Apart from considerations of supply and expense, the two factors which interfere with its general use under the circumstances indicated are its toxicity and the resistance to it which tubercle bacilli develop.

"Its toxicity is not to be ignored. Because of one toxic manifestation or another it was necessary to stop treatment in 49 (6.0 per cent) of the present series. This is not serious in itself, and careful clinical and laboratory supervision has prevented any fatalities. . . . [But] it certainly means that, for the present, streptomycin should not be used in the treatment of . . . lesions that may be expected to clear on older and accepted forms of therapy. . . ."



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OFFICIAL JOURNAL OF THE CALIFORNIA MEDICAL ASSOCIATION
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VOL. 68 FEBRUARY, 1948 NO. 2

Low Back Pain from the Orthopedic Standpoint

HUGH T. JONES, M.D., *Los Angeles*

LOW back pain is a controversial subject, in which views differ and opinions conflict.

Patients often yearn for magic in the relief of their distress. At least it is natural that they want help, want it quickly and want the physician to provide a cure without sustained effort on the part of the patient. When relief appears, the patient and too often the physician credit the recovery to a certain therapy really not responsible for the happy turn of events, though often this is not the final episode of trouble.

It is not realized that low back pain is frequently episodal in nature with periods of distress and periods of remission. It has been said that a man in his lifetime has about thirty serious illnesses, and it stands to reason that he makes some sort of recovery 29 times. Whoever the physician is at the time of recovery and whatever the method used, no matter how bizarre, that physician, or that method will likely be credited with a cure.

HISTORICAL

Low back pain has worried mankind since records have been kept and without doubt before records were kept, back to the time when our forefathers went on all fours or hung from trees. The aphorism of Hippocrates, No. LX, states: "Those that have their hip bone come out upon a long continued pain of Sciatica, shall have their Thigh wasted, and halt, unless they be burnt for it." The above was quoted by C. J. Sprengell, M.D.,* of London, in 1708, and he described how he carried out the ancient advice: "By burning three holes about the Joint of the Os Coxis with the Moxa,† I have myself (according to the advice of this aphorism) lately cured a young Gentleman, whose joint was so far relaxed, that one might very well lay ones thumb betwixt the Joints, he being very lean withal, and therefore used the Milk Diet mixed with the Testaceous Powders, to the great advantage and Remedy."[15] Thus the hip joint was considered the source of the sciatica. Later it was the sacro-iliac joint, and now it is the lumbosacral joint. Theories were necessary when facts were wanting. Facts are still wanting and theories are still necessary.

With the Twentieth Century came the careful work of Goldthwaite, of Boston.[5] It is startling to see how exactly he portrayed the posterior protrusion of the intervertebral disc in his illustration (Figure 1). He was very much aware of difficulty from the lumbosacral joints, but blamed a considerable portion of back disabilities upon the sacro-iliac joints and their ligaments, describing strains and subluxations of the joints.

The statistics of the 'teens and twenties were particularly limited by the factors that limit us today: (1) A lack of complete knowledge of basic facts, (2) Too short a follow-up in patients subject to disabilities of an episodal, recurrent nature, (3) Lack of a control series, (4) Our need to use theory when all facts are not at hand. C. J. Sprengell, M.D., in 1708, in his series of one case gave the impression that without his services the state of the patient would have been sad indeed. Likely, he did not consider what might have happened with rest and the ministration of Father Time and Mother Nature. So it is with later statistics. In 1917, Baer of Johns Hop-

* Cotugno, in 1764, has been credited with origination of the term sciatica.[10]

Read as a part of the panel discussion of back pain before the sections on General Medicine, General Practice, Radiology, and Neuropsychiatry, and General Surgery at the 76th Annual Session of the California Medical Association in Los Angeles, April 30-May 3, 1947.

† Moxa, a . . . substance prepared from the leaves of Chinese species of woodworm used as a cautery by igniting on the skin. The New Century Dictionary, Page 1103. D. Appleton.

kins,[2] wrote of manipulation under general anesthesia by forced straight leg raising in cases of low back pain and referred pain in which the patients had not been relieved by conservative measures. Of 100 patients manipulated, he reported relief in almost every instance and recurrences in only three. The time of follow-up was not given. His photographic illustration showed a patient in the typical attitude of sciatic scoliosis.

The focal infections era followed. Albee of New York, in 1927, startled those of us who were on the track of foci in teeth, tonsils, etc., by stating that at least 90 per cent of the cases of "low back pain," "lumbago," "sacro-iliac strain," and sciatica that he saw were instances of myofascitis. It was his belief that the vast proportion of these patients had their foci in the colon, and in reporting the results in 46 cases treated, most of which were instances of low back pain, he claimed 95 per cent of excellent and good results.[1]

In 1926, Smith-Petersen, of Boston, after a very careful study reported end results in 26 cases of arthrodesis of the sacro-iliac joint for traumatic and nontraumatic arthritis.[14] It may be argued that a different type of case was under study, but the sacro-iliac joint was the site of the distress, with radiating pain extending to the posterior thigh in 89 per cent and to the posterior leg in 81 per cent of the cases. There was a body list in 72 per cent and spasm of the erector spinae muscles in 74 per cent of the cases. He found complete recovery in 84.6 per cent and partial recovery in 7.7 per cent.

It was confusing to hear reports of similar disabilities relieved in such high percentages of cases in such a variety of ways. Many physicians before and since the time of Baer have witnessed dramatic relief following manipulation. Many will agree that the removal of foci of infection has been followed by dramatic relief for back pain, and in certain instances it is difficult to credit other agencies. The bowel may even be a source of focal infection in certain instances, but facts seem wanting to prove that focal infection is the major cause of a large majority of the cases of low back pain. The high percentages of relief in Smith-Petersen's carefully followed series of sacro-iliac fusions can likely be explained by the period of postoperative bed rest, and because in the course of the operation the structures from the posterior ilium were stripped away. Roberts and Heyman later reported relief in a series of cases in which only the stripping procedure was done and not the sacro-iliac fusion.[12]

The 1930's were especially productive and definite advances were made. Schmorl, just before and after 1930, gave his classic descriptions of the gross and microscopic changes in the intervertebral discs. After careful study of a tremendous amount of autopsy material, he demonstrated that the discs are avascular except in the embryo and during early postnatal life. He concluded that of all the external agencies affecting the discs, trauma was the most important. In trauma he included the minor jolts of life as well as the severe injuries.[13] Boyd, the pathologist, following Schmorl's work, reported that in autopsy material the finding of well preserved discs in middle life was the exception and not the rule. He claimed that of all the tissues of the body, the disc has shown the greatest tendency to degenerate, not excepting the intima of larger arteries.[3] Such facts have clinical applications. We have ample evidence of what trauma does to an avascular semilunar fibrocartilage, and it is probable that injury to the intervertebral fibrocartilage is also followed by imperfect healing. Of extreme importance is the early degenerative processes taking place in these discs. The work of Mixter and Barr brought to light and general knowledge in the United States the clinical importance of posterior protrusion of the intervertebral disc and their work is well known, but the underlying facts and theories are not so generally understood.[11]

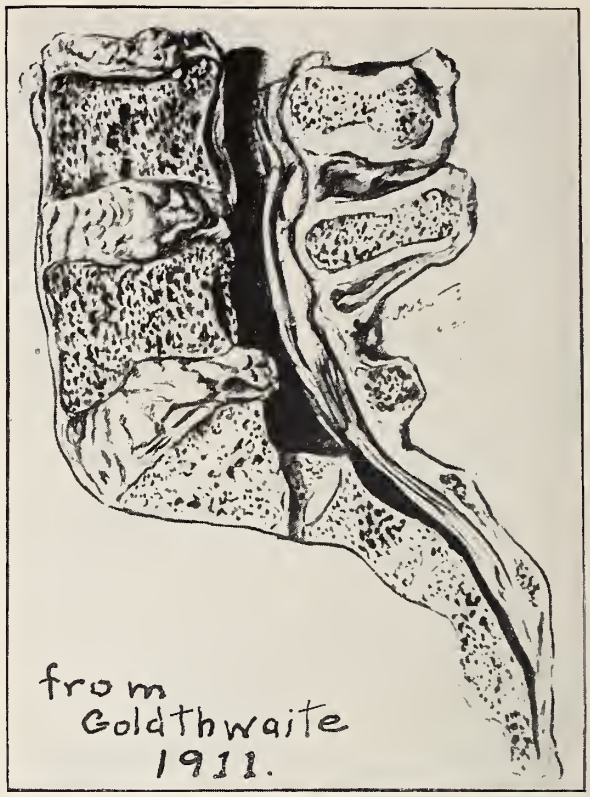


Figure 1

REARRANGEMENT OF IDEAS

New facts made known in the past decade have forced a rearrangement of ideas, but still it cannot be assumed that the problem of low back pain has been solved. Certain points seem settled while others are still not proven. The point seems clear that it is no longer necessary to call upon the theory of sacro-iliac strain and subluxation to explain the complaints of a large proportion of patients presenting pain and tenderness in the region of the sacro-iliac joints with or without sciatica. These signs and symptoms have been found repeatedly by many observers

in patients presenting proven pathologic changes in the lower spinal discs and repeatedly relieved by surgical attack on the discs. I am with those who doubt the existence of extensive mechanical trouble in the sacro-iliac joints aside from the relaxed joints of pregnancy and actual disruption from severe trauma such as occurs in certain pelvic fractures. This does not prove that other lesions may not produce the same symptoms. Here a difference of opinion has arisen. J. Albert Key has held that the intervertebral disc lesions comprise the most common cause of low back complaints, with and without sciatica.[8] Watson-Jones [17] on the other hand has held that the syndrome of sciatic scoliosis with sciatica is produced by two other important types of lesions besides the protruded intervertebral discs: (1) Myofascial and ligamentous injuries, (2) articular injuries to the sacro-iliac, lumbosacral or interarticular joints of the spine. He has recommended the novocain test of Steindler and Luck [16] to separate the cases of myofascial injury from the other types.

There is proof that tears do exist in the muscular and ligamentous structures of the back. For instance, when a series of spinal transverse processes are torn off there must be muscular and fascial tears. Interarticular joints are injured, for facets are fractured and osteoarthritis of these joints is best explained by previous trauma and wear. I can see how facet changes may cause local distress in the back, and I know that overriding of the facets will diminish the size of the intervertebral foramina, but I think that disc protrusion is a much more reasonable cause of radicular pain than facet pressure. Here again facts are not at hand for definite proof. I am skeptical about myofascial and sacro-iliac causes of sciatic scoliosis, because I have so repeatedly seen disease of the disc with nerve root pressure clearly causing the sciatic scoliosis syndrome while I have not had proof to relate the other causes claimed for the syndrome. When thoughtful men seem convinced, I must hold my decision and await evidence.

SYNDROME OF THE LOW SPINAL DISC

In the case of back pain, when investigation reveals a very definite infection like tuberculosis, invasion by neoplasm or a fractured vertebra from direct trauma, a plan of treatment can be laid down. It is the indeterminate low back pain that has long caused the poor human to scratch his head and wonder. What is the syndrome of the injured disc and what part can an appreciation of its features play in understanding the riddle? We today must also use both fact and theory. In the first place it is not generally realized how early in life injury and degenerative changes in the discs may start. I have repeatedly been surprised in obtaining histories from patients with definite disease in these discs when no definite injury could be uncovered other than a twist or a stoop, until the story has been related about a fall from a porch, roof, or hay-mow in childhood or during the early 'teens.

One female patient, 34 years of age, with an unusually strong type of sthenic build was found at operation to have a very large disc-protusion causing pressure on the first sacral root. She told of an awkward twist in recent years which initiated back pain, and the episodes were repeated with severe radiculitis. No reasonable explanation of so gross an injury was uncovered until she related that in childhood she had lived on a farm and the family and she were very proud of her strength. At eight years of age she could and did carry many sacks of animal feed weighing 60 pounds. This may be far fetched for proof, but if these stories are obtained frequently enough by careful questions, they may mean something.

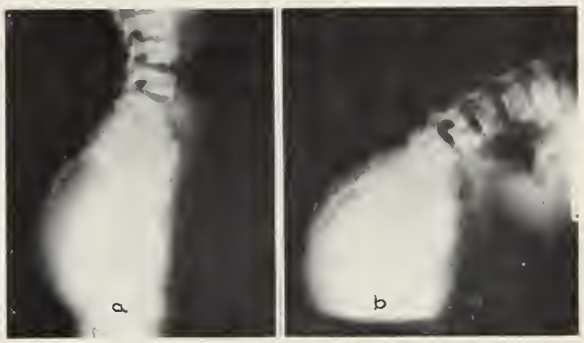


Figure 2

Much thought and literature have been devoted to the possible relationship of faulty posture to the syndrome of the disabled low spinal discs. It is certainly not a prerequisite for this trouble, because protruded discs often are found in patients with the athletic and sthenic habitus and good posture. These people are strong, crave activity and subject their bodies to terrific trauma. Moreover they are frequently injured by a heavy fall on the buttocks when the lumbar spine is flattened and the upper surface of the sacrum is horizontal rather than tilted as in the inclined pelvis of faulty posture. It is claimed that the shearing stress of the pelvis tilted forward in faulty posture, combined with the hollow lumbar spine, can wear away the intervertebral disc eventually. In these patients the body weight is carried on the top of a sacrum that slumps forward. It is within reason that constant pressure so exerted on the posterior part of the disc after repeated mild jolts as suggested by Schmorl,[13] may result in degenerative changes and possibly be a factor in producing disintegrations that later allow protrusion. A forward bend to lift a heavy weight is often blamed by the patient for the onset of acute symptoms. (Figure 2, a and b.) One hundred pounds so lifted can be multiplied possibly to one thousand pounds of pressure in the lower back by the principle of the cantilever. The longitudinal ligament posterilaterally is normally weaker than anteriorly or laterally, and if the posterior part of the disc has deteriorated and this deterioration has been hastened by the long continued trauma of faulty posture, I can see an etiological relationship in faulty posture. I can see that posture may have another relationship. Many of

these patients with altered lower spine discs are more comfortable when the lumbar spine is flat, and the patient with faulty posture presents a hollow back unless something has happened to change his attitude. However, contracted soft tissues of long standing may interfere with the attainment of anything but a sway back in these patients. I think that pronated flat feet can be a factor only in a limited way in connection with posture in general. The amount of blame that we can, at present, assign to faulty posture in the production of protruded discs is still not proved by definite facts.

Study of the typical progression of symptoms in this syndrome of the low back discs is worth attention. Early symptoms are located in the lower back, but after a recurring attack or two, the pain is referred also to the back of the hip or the mid gluteal region. Keegan has explained this by pointing out that in the development of root pain in this condition, the first sensory contact of the posterior primary division of the root is against the ligamentum flavum, and as the skin of the buttocks is supplied by this portion of the nerve root the buttock pain has a reasonable explanation.[7]

Later in the history of these patients with one more attack, possible with complete or incomplete remissions, the pain is not only felt in the buttocks but down the leg. It may be one leg and then the other, or rarely be down both legs. The pain does not follow the distribution of the sciatic nerve but picks out the area supplied by a spinal nerve root. The nerve roots overlap so that at least two adjacent roots must be affected to produce actual anesthesia, but the patient often complains of parasthesias in the area supplied by one irritated root. A still later development in this syndrome of attacks and remissions is that the distress may be constant and the remissions incomplete. This is repeatedly found at surgery to be explained by a complete protrusion of the disc material through the posterior longitudinal ligament into the spinal canal in an irreversible way. These people report that manipulation has ceased to influence the attacks of distress. At operation one can see that an attempt to accomplish anything by manipulation would be futile.

CASE REPORT

It is not often that one is able to follow such a case for 25 years. In this instance my wife has been my patient. To recite the symptoms would merely be a repetition of the

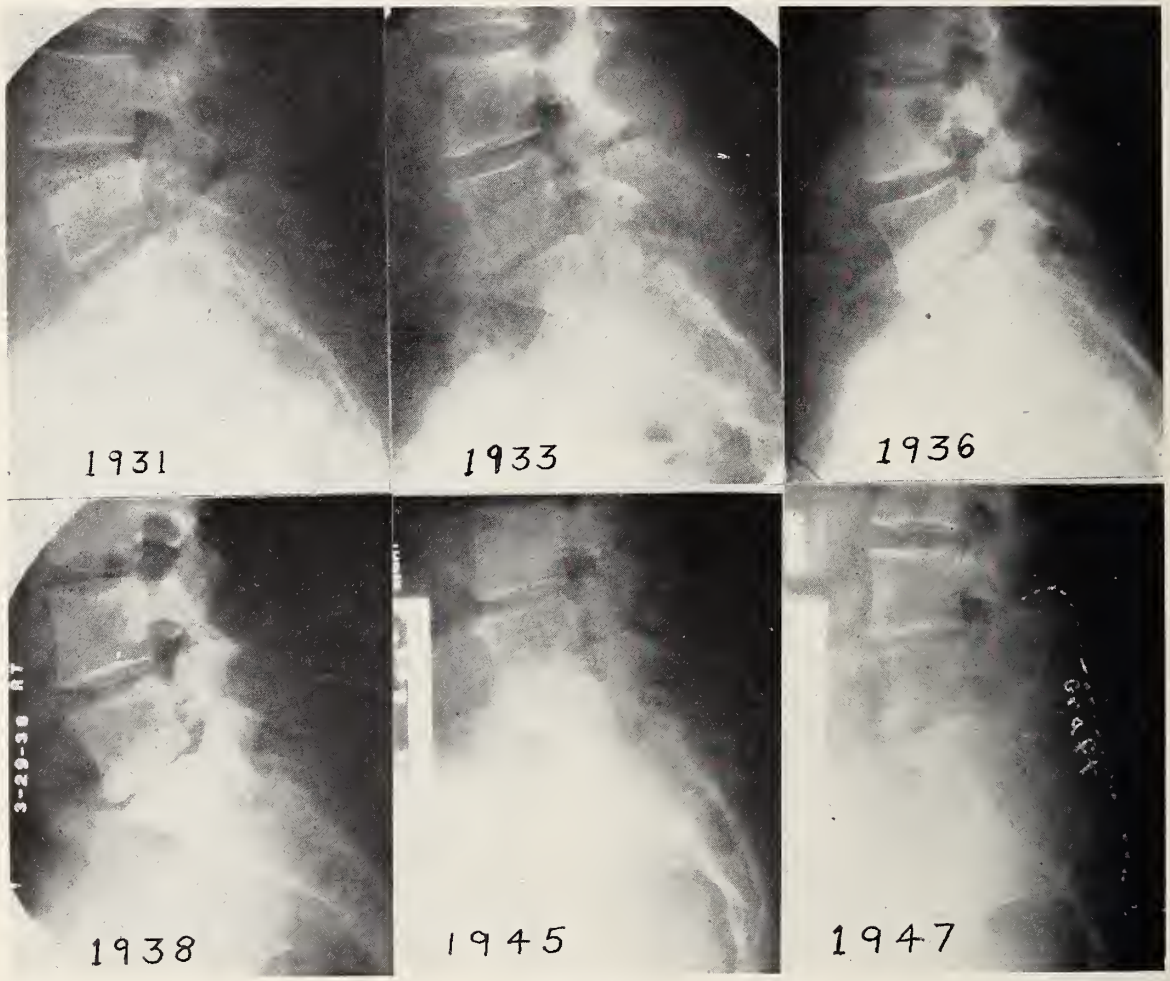


Figure 3

syndrome previously outlined. The series of x-rays began in 1931, and rather definite changes were present when symptoms first suggested an x-ray examination. (Figure 3.) She was unusually active during her 'teens, and it is her belief that her vigorous activities of this early period were a factor. Falls from horses and other severe types of trauma may have had an effect, then and later, for she has ridden horses for many years. Conservative care proved useless when constant misery lasted from July to November, 1945, and it seemed time for surgical relief. We shall be forever grateful to my associate, Dr. John Black, who dissected the fifth right lumbar nerve root from a protruded disc that had ruptured through the posterior longitudinal ligament between the fourth and fifth lumbar bodies, and the patient was transformed from an invalid to active life. The series of roentgenograms over the period of years since 1931 can be followed to see the progressive thinning of the lumbosacral interspace, the development of hypertrophic spurs on the vertebral bodies, and the eburnated surfaces of the vertebrae adjacent to the severely altered disc. It is noteworthy that at the lumbosacral level with its very narrow interspace, no nerve root pressure was found, but at the next joint above was found the large disc protrusion. This interspace between the 4th and 5th lumbar bodies was narrowed, but an observer not sensitive to minor variations would likely consider the narrowing within normal range.

TREATMENT IN GENERAL

The mention of operation does not mean that surgical treatment is a desirable solution for the majority of patients with backache. There are a number of reasons why conservative care needs to be emphasized, and a review of conservative measures employed in the past is in order before arriving at any conclusions as to therapy:

1. Rest, emphatically, has been the one most helpful form of treatment, and in outlining the regime to be followed, one had best not violate this dictum demanding rest during the acute period; and in aggravated cases, the acute period may be prolonged. In the surgical exploration of spinal nerve roots that have been severely injured by the pressure of displaced discs, it has often been observed that the injured nerve root has been edematous and markedly swollen. (Figure 4).[9] When exercise for strengthening weak muscles or stretching procedures for contractures are employed in such acute cases the irritation can definitely be prolonged. Rest will often be advantageous early in an episode of trouble even after moderate injury, when the patient feels that with a measure of discomfort he can continue on the job. Rest in bed without getting up for toilet or meals is best. In the supine bed patient, the knees should be on a pillow and the head and shoulders raised slightly in order to take advantage of the flat back position. When on the side, the patient should bend hips and knees again to avoid the hollow back position. Traction of six to ten pounds on each leg has often been used, with apparent help, but again it seems reasonable to carry this out without hyperextending the lumbosacral spine. A bed made firm by boards under the mattress may be helpful.

2. The second remedy tried by time is further rest to the region provided by support after the patient gets out of bed. Various corsets, braces and casts have been used and the one criterion is that they

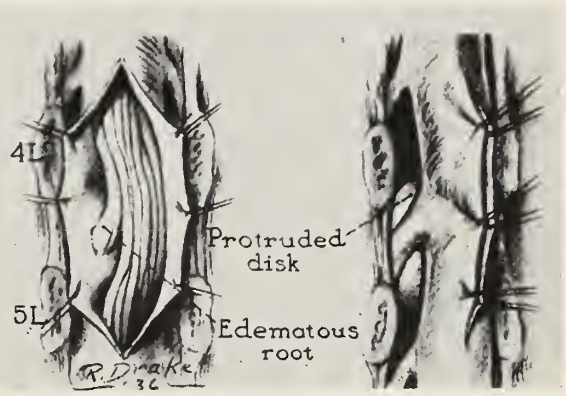


Figure 4

be well fitted and do the work intended. The objection is raised that the industrial patient may abuse the privilege of wearing a support and may use it as an excuse to prolong and magnify his complaint. This is a possibility, but even the industrial patient must have rest to this region in case of injury to the lumbosacral mechanism. Here again there are different views. Watson-Jones applies a plaster corset, suspending the patient with a Sayre head sling, and continues support for a minimum of three months. He is impressed by this same belief that early exercises are not called for in these patients.[18] Others, notably Williams,[20] of Dallas, starts exercise much earlier and is impressed with the importance of postural rehabilitation.[19] The only definite rule that I can give is that rest is of paramount importance, and exercises and stretching, if carried out, must not continue the irritation.

3. Heat and massage have been used through the ages and as a rule mankind in general enjoys warmth and massage of the back. In certain instances it definitely irritates, however, and should not be continued at the expense of comfort.

4. Manipulation has also been used since time immemorial. Because of an occasional paraplegia produced by manipulation and more frequent paralysis of the external popliteal nerve brought out by the Baer type of procedure, and because of the frequent temporary nature of the relief provided, manipulation has a limited value. In the "off again on again" type of case it has some basis for trial, but manipulation can easily be carried to unreasonable extremes, for instance when the patient has progressed to the stage of an irreducible protrusion. Too often, manipulation has been carried out empirically without a clear idea of what condition is present and what one hopes to accomplish. Doctor and patient are prone in these instances to hope for mystic and magic. It is hoped that something can be done for a set of symptoms where facts are lacking about the exact condition present.

5. I am skeptical about the marked value of novocain injections, but because careful men have recommended it, I shall wait for more evidence and information.

6. Pain may demand medication. Aspirin and codeine are usually sufficient but heavy narcotics may be needed for short periods of time.

CHOICE OF TREATMENT

Treating the patient first of all and his backache secondly is sound advice. This cannot be done unless the doctor is a physician first of all and a specialist secondarily. This cannot be done without a careful general history and examination, in addition to the specific orthopedic tests. Measures necessary to improve the patient's general health are often of much import, and without a general survey many aids can be missed by not considering such things as obesity, malnutrition, hypo and hyperthyroidism, avitaminosis, etc. Possibly the choice of treatment is often decided by the patient's age, state of health, and particularly by his ability or desire to cooperate. A general knowledge of the patient's background must be attained, and the orthopedist must be enough of a psychologist to appreciate possible psychic factors. It is claimed that malingerers and psychoneurotics are repeatedly manufactured by the attitude of the doctor or his assistants. As it is the doctor's first duty not to do harm, this possibility must be appreciated and watched when treatment is being chosen.

To simplify the plan of treatment, it is helpful to divide the patients complaining of low back pain into mild, moderate and severe classes.

1. In the mild class, symptoms are generally referable to the low back only, and episodes have been few. Though this individual may be at the start of the progression of events suggested by Schmorl's

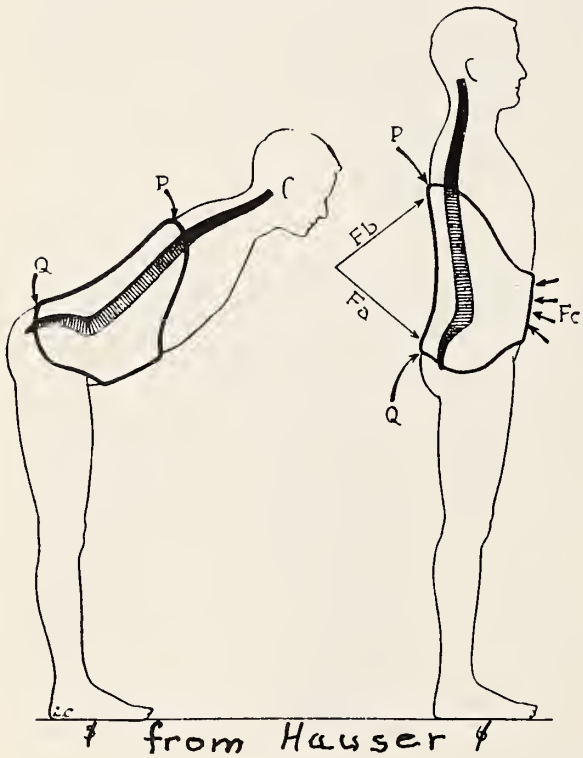


Figure 5

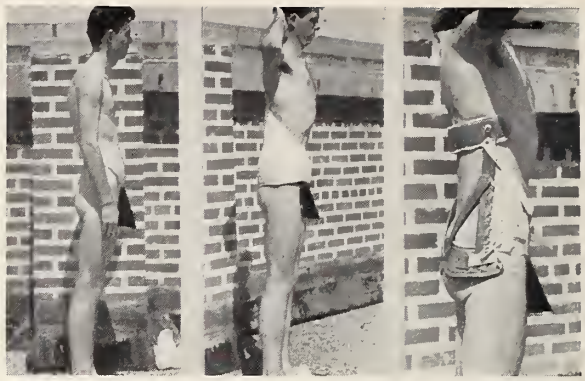


Figure 6

work, he will not tolerate more treatment than low back taping and possibly heat with massage to help him over the attack. If faulty posture is present, posture training will probably do more for this patient than it will in the more extreme and neglected cases. It will be harder to sell the posture idea to this individual. At least he should be instructed to avoid the attitude of lifting in the forward bent position and be schooled how to avoid other attitudes that may initiate further trouble.

2. The moderate cases are those in which the patients have moderate but definite disability because of low back pain, but with few or infrequent recurrences. Referred pain may be to the buttock only, or down the leg. Rest in bed without getting up for meals or toilet is important. Addition of traction has theoretical value and prolonged trial to support its use. At least it serves to help keep the patient in bed. It is well to be on the side of too much rest than not enough. The "active" cast used so regularly by Hauser (Figure 5)[6] and others, has much in its favor, for it provides support for the lower back and helps maintain the attitude of the flattened lumbar curve that these patients assume in the acute stage of protective spasm. It further forces the patient to use his voluntary muscles that maintain the erect attitude, and it forces a certain amount of stretching of the contractures. By forcing the use of muscles to hold the trunk erect, it avoids the objection that casts cause muscular atrophy. I employ it also in cases of early low back injury, particularly when there has been a hard fall on the buttocks and I wish to provide support for the low back in good posture. The "active" cast can be succeeded or supplanted by the Goldthwaite or Williams type of brace in order to support the lower abdomen and maintain an erect spine from the sacrum to the 9th dorsal level (Figure 6). Rest and support has priority in this class and activity to improve posture, desirable as it may seem, must not produce irritation.

3. The severe cases include those with severe and repeated attacks of pain and disability with a prolonged history. Attacks are likely to be protracted and with very incomplete remissions. Certain of these patients will profit by conservative care, but, if not so relieved and rather definite signs that a

protruded disc is the most likely cause of trouble, ultraconservatism is unwarranted. Long enough contact with the case to be able to rule out tuberculosis and malignancy is important. Other causes of intraspinal, radicular, plexus and nerve trunk pain must be eliminated. I once found the cause of a severe sciatic neuritis to be an aneurysm in the pelvis. Neurologic consultation with the evidence from the pantopaque myclogram will help rule out other intraspinal causes of pain and usually, but will not always, show the disc protrusion. At times its value is more negative than positive; for instance, abnormalities of the two lower spinal discs are not as accurately visualized by contrast media as changes in the three upper lumbar discs.

A young wage earner not burdened with a compensation complex, if disabled, may be a subject for operation earlier than a sedentary person who can afford longer watchful waiting. The decision to employ surgical therapy should not be undertaken lightly or without the protection of consultation. Not all these patients are relieved and the operation carries with it a mortality rate, small, but definitely a threat. Patients with a compensation claim or a legal action pending are less favorable subjects for surgery than patients without these matters to consider. Craig reported that it was his observation during the recent war, that disc operations in the foreign field were not successful except in officers and enlisted men who wanted to remain overseas. Then he found that in this country with careful selection of cases, almost 100 per cent of the officers returned to duty, and a slightly smaller percentage of enlisted men.[4] These findings argue for care in choosing operation for patients with compensation claims, but even here conservatism can be carried too far.

Whether fusion is to be done or not done following procedure for the protruded disc has provoked much discussion. Reasons contrary are several:

1. Fusion requires a moderate increase in the scope of the operation.

2. Should a good result not be attained, future exploration may entail the difficulty of removing a bone graft and digging through much bone.

3. Fusion concentrates the strain above the level of the fusion.

Reasons in favor are several:

1. Removal of an intervertebral disc increases the instability of a joint that is already faulty.

2. A considerable number of painful backs that follow neurosurgical procedure without fusion are later relieved by fusion.

3. The use of two teams does not greatly prolong the time of operation and where only low back fusion is done, the postoperative period of disability is not so prolonged as formerly thought necessary.

This problem will have to await more evidence. At present I favor fusing a larger proportion of the patients when the intervertebral disc has been removed. When there is need for as simple an operation as possible, as in older people, it had better be omitted. In younger patients where stability of the lower back is more important, fusion is more important.

1416 Melwood Drive.

Table 1.—*Classification of Causes of Back Pain*

I. Postural Strain
 (Chronic drag of gravity)

II. Trauma
 1. Injury to soft tissues
 2. Injury to vertebrae and joints
 3. Injury to intervertebral discs

III. Infection
 1. Spondylitis deformans
 2. Fibrositis and myositis
 3. Actinomycosis
 4. Blastomycosis
 5. Brucella abortus
 6. Osteomyelitis
 A. Pyogenic organism
 B. Typhoid
 7. Epidural abscess
 8. Neisserian involvement

IV. Catch All Class
 (Growth disturbances, metabolic, endocrine, senescent and neurotropic)
 1. Osteochondritis (Calve)
 2. Adolescent epiphysitis (Scheuermann)
 3. Senile epiphysitis and osteoporosis
 4. Neuropathic joints of tabes and syringomyelia
 5. Parathyroid tumor
 6. Paget's disease
 7. Gout

V. Congenital Anomalies
 1. Defects of isthmus (most important)
 A. Spondylolisthesis
 B. Spondylosis
 2. Spina bifida (occulta)
 3. Asymmetrical lumbosacral facets
 4. Sacrilization transverse processes
 5. Lumbarization transverse processes
 6. Extra or deficient vertebrae
 7. Wedged vertebrae

VI. Neoplastic
 1. Benign
 A. Osteoma and osteochondroma
 B. Giant cell tumor (may be malignant)
 C. Hemangioma
 D. Eosinophilic granuloma
 2. Malignant
 A. Primary
 a. Sarcoma and osteogenic sarcoma
 b. Lymphoblastoma
 c. Ewing's tumor
 d. Multiple myeloma
 B. Secondary (metastatic)
 a. Carcinoma of breast
 b. Hypernephroma
 c. Thyroid
 d. Prostatic carcinoma
 3. Tumors of the spinal cord, its meninges, roots and the filum terminale

VII. Vascular
 1. Aneurysm

VIII. Psychogenic
 1. Hysteria
 2. Malingering
 3. Psychoneurosis

QUESTIONS AND ANSWERS

DR. JONES: "My first question: What mechanism is presumed to occur when immediate relief of severe back pain is obtained by manipulation?"

I believe that immediate relief of back pain, particularly radicular pain, takes place upon manipulation, when the protruding disc is taken back into the intervertebral space. This can be seen in surgery. When the patient has the back hyperextended, the disc will repeatedly be seen to protrude. If the back is flexed, and the abdomen raised, it can be seen at times that this disc will be reduced into the intervertebral space.

Question: "Why do you conclude that disc surgery weakens a back, when it is already weakened prior to surgery?"

I don't know that I do conclude that disc surgery weakens the back. It is weak before surgery, but after the intervertebral disc has been scooped out, the instability of structures there possibly may be increased. I don't think there is any argument on that score, because I believe in making the thing stable whether it is loose because of surgery or degenerative changes in the disc.

Question: Several questioners wish to know the postoperative care.

As to the care following surgery in which we have done a fusion operation, I may recount the experience of my wife.

She was in bed for about two weeks. She could walk up and down the stairs at the end of three weeks. After six or eight weeks, she did a good part of her housework. Now, a year and half later, she has been riding horseback for about a year. That is about as rapidly, I think, as it could be carried along. Formerly we thought cast fixation was necessary over a long period. We now believe that for a low back fusion, the muscles themselves are the greatest means of providing the fixation needed. A series observed over a period of years may be needed to be sure that such short fixation is adequate.

Question: "In so-called, 'subluxation,' what portion of the spine do you consider to be the site of the trouble?"

It is my belief that luxation, for instance, of the sacroiliac joint is of very rare occurrence. During the relaxation of pregnancy, probably this does take place, because the patient waddles, and has difficulty in walking. After a fracture of the pelvis, in which there is severe trauma, probably a disruption of the sacroiliac joint does take place, but it is my belief that the strong structure of the sacroiliac joint does not often allow luxation.

REFERENCES

1. Albee, F. H.: Myofascitis, Am. J. Surg. N. S., 111, No. 6, 523 (Dec.), 1927.

2. Baer, W. S.: Sacroiliac strain, Johns Hopkins Hosp. Bull., XXVIII, No. 315, Plate XXI (May), 1917.

3. Boyd, Wm.: Surgical pathology, Ed. V, p. 649, W. B. Saunders Co., Philadelphia and London, 1942.

4. Craig, W. McK.: Lecture at the Clinical Congress of the American College of Surgeons, Cleveland (Dec.), 1946.

5. Goldthwaite, J. E.: The lumbosacral articulation, Boston Med. & Surg. Jour., 164, 365, 1911.

6. Hauser, Emil: Corrective cast for treatment of the low back pain, J. Am. Med. Assn., 128, 92 (May 12), 1945.

7. Keegan, J. Jay: Diagnosis of herniation of lumbar intervertebral discs by neurologic signs, J. Am. Med. Assn., 126, No. 14, 868 (Dec. 2), 1944.

8. Key, J. A.: Intervertebral disc lesions are the most common cause of low back complaints, Ann. Surg., 121, No. 4, 534 (April), 1945.

9. Krusen, F. H.: Physical medicine, W. B. Saunders Co., Philadelphia and London, p. 743, 1941.

10. Lewin, P.: Backache and sciatic neuritis, Lea & Febiger, p. 438, Philadelphia.

11. Mixter, W. J., and Barr, J. S.: Rupture of the intervertebral disc with involvement of the spinal canal, New England J. Med., 211-210 (Aug. 2), 1934.

12. Roberts, P., and Heyman, C. H.: Quoted by Ober, F. R., J. Bone & Joint Surg., XVIII, 105 (Jan.), 1936.

13. Schmorl: Work reported in English by Beadle, O. A., Medical Research Council, Special Report Series, No. 161, London, 1931.

14. Smith-Petersen, M. N.: End result study of arthrodesis of the sacroiliac joint, J. Bone & Joint Surg., VIII, 118 (Jan.), 1926.

15. Sprengell, C. J.: Aphorisms of Hippocrates and sentences of Celsus, Sect. VI, p. 183, R. Bonwick et al., London, 1708.

16. Steindler, A., and Luck, J. V.: Differential diagnosis of pain in the back, J. Am. Med. Assn., 110, 106 (Jan. 8), 1938.

17. Watson-Jones, Sir Reginald: Fractures and joint injuries, Williams and Wilkins Co., Baltimore, Vol. 1, Ed. 111, 365.

18. Watson-Jones, Sir Reginald: Statement in postgraduate course in fracture treatment, Chicago (Jan. 30 to Feb. 2), 1947.

19. Williams, P. C.: Illustration printed in report of Posture Committee of the American Academy of Orthopedic Surgeons, p. 25, Chicago, 1947.

20. Williams, P. C.: Instructional course, American Academy of Orthopedic Surgeons, Chicago (Jan.), 1947.

A Consideration of Etiology in the Development of the Ruptured Intervertebral Disc

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PATHOLOGIC changes in the lumbar intervertebral discs are now recognized as one of the most common causes of low back pain. This is not at all surprising since most people develop such lesions at one time or another in their lives. The ordinary stresses and strains thrown on these structures by routine activity cause wear and tear exactly the same as on anything else subjected to continuous use. The symptoms in the majority of instances are mild and are of no concern to the patient. The lesion usually heals spontaneously without medical attention, and causes little or no disability.

When the pain is sufficiently severe to cause concern or disability, medical attention is usually sought. Conservative management of these people by immobilization of the back, rest, medication for pain usually suffices. However, a small number of cases resist nature's healing forces and eventually surgical removal of the lesions is required.

REVIEW OF LITERATURE

The rather voluminous literature on the subject is somewhat controversial. Dandy [4] and Jelsma,[6] who advocate simple removal of the disc, report approximately 90 per cent good results without fusion. A shorter morbidity period is emphasized; fusion is even discouraged. Grant,[5] in a critical review of the literature and a report of 200 cases, made it clear that there is no uniform standard for classifying postoperative results. The figures from many sources indicate, however, that good results were obtained from simple removal of the disc in 70 per cent or more of the cases. In the discussion of Grant's paper, Mixter indicated his belief that in patients who are required to do heavy labor postoperatively and who demonstrate abnormal mobility of the affected joint, a combined removal of the lesion and fusion might very well be done.

Briggs and Keats [2] recommend removal of the lesion and fusion to prevent collapse of the joint space and secondary root compression, with excellent results, but statistical data is not given. Peyton and Levin [8] advocate fusion in addition to removal of the disc and report back pain alleviated in 70 per cent of cases. Compere [3] reports using the combined operation for five years with good results, but no figures are quoted.

Magnusen [7] gives an excellent account of the complex structures of the lumbar joints. The pathologic effects of stress and strain are described but no mention of the hydrodynamic action of the semi-fluid nucleus pulposus on the joint during these stresses is made. Fusion in all cases is strongly recommended, but no figures are given.

Atkin and Bradford [1] reported on 170 cases operated by various orthopedic surgeons and neurosurgeons on the list of National Insurance Carrier (1940-1944). Twenty-one cases had removal of the lesion and fusion. In only 25 per cent of the cases was the result classified as good. One hundred three cases had only the disc removed. Approximately 40 per cent of the cases were classified as good results. In 67 cases in which operation was performed, no disc was found. Complications: There were six fatalities, nine cases of sepsis, one case of osteomyelitis, four cases of phlebitis, one spinal headache (so-called), six cases of toe drop, and three cases of quadriceps paralysis.

The available figures would serve to discourage a combined disc removal and fusion operation. However, when the figures and complications are scrutinized, it would appear that one might question the quality of work rather than the type of operation employed.

ANALYSIS OF CASES

We have analyzed 200 consecutive cases of ruptured intervertebral discs in patients suffering sufficiently, in our opinion, to justify surgical treatment. During the five-year period (1940-1945) in which these cases were seen, there were 211 patients with low back and leg pain operated upon. Nine had other lesions, and two others, both of whom recovered, were omitted to make the even number of 200 cases.

In this series the clinical history and findings were typical of ruptured intervertebral disc in about 80 per cent of the patients, and in these cases spinal myelography appeared unnecessary. If a gross filling defect were not seen, the unwary might be led to the false impression that an abnormal disc was not present. Whereas the experienced would recognize these laterally situated lesions on the history and clinical findings, and not be misled by a false negative myelogram.

On the other hand, if the clinical picture varies from the typical pattern, e.g., bilateral leg pain, nocturnal backache, unilateral leg pain through several dermatomes, ill-defined sensory changes in more than one dermatome, etc., then a spinal myelogram is imperative in order to rule out or establish the presence of other lesions—neoplasms, vascular lesions, adhesive arachnoiditis, etc.

In selecting patients for operation, we have demanded certain definite criteria: (1) Acutely disabling intractable pain and physical signs of disc lesion not responding to conservative treatment;

Read as a part of the panel discussion of back pain before the sections on General Medicine, General Practice, Radiology, and Neuropsychiatry, and General Surgery at the 76th Annual Session of the California Medical Association in Los Angeles, April 30-May 3, 1947.

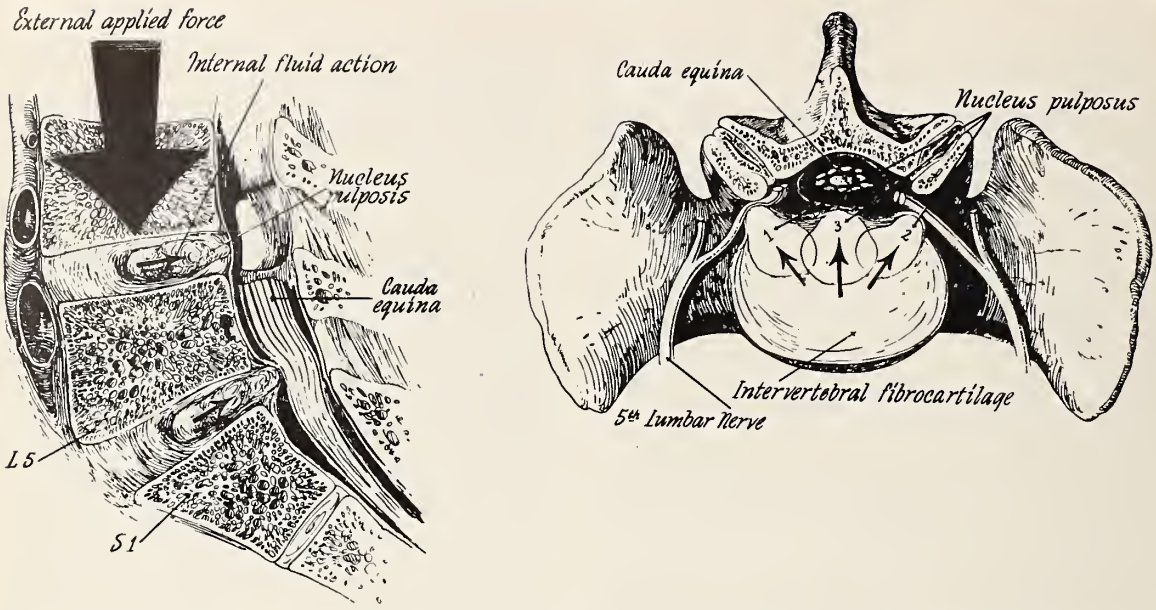


Figure 1.—Large arrow at left side shows direction of external applied forces from ordinary stresses and strains. Small arrows show usual direction of internal fluid action of nucleus pulposus as a result of external applied forces. At right, small arrow No. 1 shows lateral migration of nucleus pulposus impinging on nerve root. Small arrow No. 2 shows migration without nerve root involvement. Small arrow No. 3 shows the direction of force from the occasional midline lesion.

(2) Recurring attacks of acute, disabling pain and physical signs where it is economically unsound to consider continued conservative management; (3) Danger of irreversible disabling neurologic changes. The latter is only occasionally encountered.

PRINCIPLES OF SURGICAL TREATMENT

Compression of the semi-fluid nucleus pulposus from minor stress and strain creates internal pressure on the annulus and binding ligaments. There is then a tendency of the nucleus to migrate in the direction of the least resistance. Any force applied to weaknesses in these confining structures will cause injury and further increase focal vulnerability. Through this mechanism, we believe, a great deal of common back pain is precipitated. Furthermore, repeated application of these forces will eventually cause rupture and impingement on regional structures (Fig. 1).

Surgical treatment is designed to terminate the operation of these pathogenic internal forces by removal of all the abnormal material from all the affected discs. Since the fourth and fifth lumbar discs are so frequently affected coincidentally, we, among others, believe that both these discs should be explored when either is known to be pathogenic. Even at times, when the findings indicate, the third also should be inspected. They are exposed with a punch rongeur, leaving the laminae and facets intact. The nucleus pulposus and the cartilagenous plates of the opposing vertebra are then removed, but the annulus is preserved. The space is then packed with bone chips, in most instances, and the nerve root is then decompressed dorsally (Fig. 2.).

The principal aim, then, of the operation is to remove the disease and restore the back to as near normal as possible. The bone chips in the place of the nucleus pulposus are not intended to cause fusion. On the contrary, they are intended to maintain the joint space and serve as a framework for cicatricial formation. In the majority of cases the calcium has disappeared by the end of six or eight months without fusion (Fig. 3).

STATISTICAL DATA

The location of the lesions in this series was as follows: Multiple lesions at lumbar 3, 4, and 5, were found in 3 per cent of the cases. Double lesions at lumbar 4 and 5, in 29.5 per cent of the cases. Single lesions at lumbar 5, in 36 per cent of the cases; at lumbar 4, in 28.5 per cent; at lumbar 3, in 1 per cent; at lumbar 2, in .05 per cent; at thoracic 12, in 1.5 per cent.

In the entire group of patients, 168 were private, about equally divided in light and heavy occupations. Of these patients, 85.1 per cent returned to their original work relieved, while 8.9 per cent were relieved but changed to lighter occupations, making a total of 94 per cent good results; 3.5 per cent were relieved of their preoperative physical evidence of disease but continued to complain and, therefore, were classified as unimproved. Another 2.5 per cent were unimproved, showing varying degrees of muscle spasm on activity, and were suspected of having additional disc disease. Some patients among the "good results" who had secondary operations showed adjacent disc disease and were relieved after its removal. The impression gained from earlier experiences is that, if removal is confined to lesions which can be demonstrated by myelography, much of the disease may be missed. Leg pain is ordinarily relieved, but disabling backache returns from an

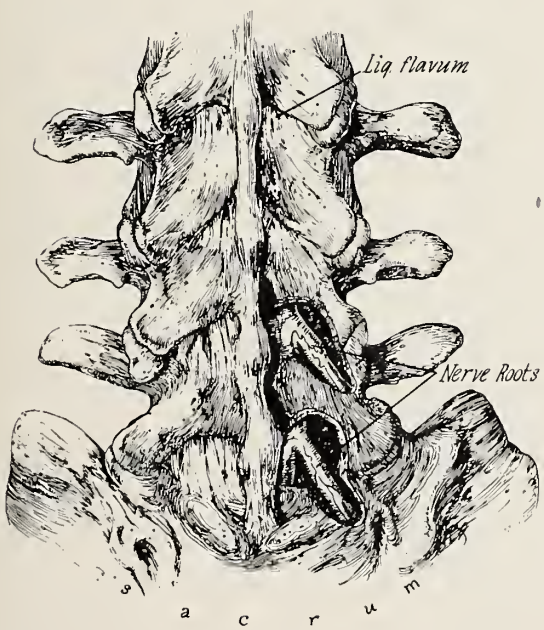
adjacent lesion or lesions in a sizable percentage of cases.

Results in the industrial cases, of which there were 32, were not so encouraging: 43.7 per cent returned to their original work; 3.2 per cent were unimproved; 34.4 per cent were relieved of objective signs, did spotty work, but were generally back-conscious and compensation-minded; 18.7 per cent were relieved of objective signs but began to complain of pain when instructed to return to work. Many of these employed an attorney and set out on the mission of establishing permanent disability. This group, by and large, had been badly handled by the insurance carrier. Compensation had been repeatedly stopped for one reason or another, in spite of their disability. They had been accused of laziness, dishonesty, hysteria—in fact everything, including malingering. Several of these patients later actually admitted relief, but because of the abuses during disability insisted on having their inning, and did.

The age incidence has not varied greatly from other figures; the oldest patient was 68 years old and the youngest was 16. The majority were in the third, fourth and fifth decades of life. The duration of symptoms varied from four months to 25 years. The average hospital period was two and one-half weeks. In the 94 per cent of good results among private patients the shortest loss of time from gainful occupation was three weeks; the longest, 11 months, with an average of three and one-half months. Discomfort usually subsided between the fourth and eighth month. Recurrence of brief and not disabling episodes of back discomfort common to the average man, we have reason to believe can, and does, follow in some cases regardless of whether the opera-



Figure 3.—Arrows indicate levels of disc removals. The space was packed with bone chips. Roentgenograms were taken six months later and showed no evidence of chips remaining.



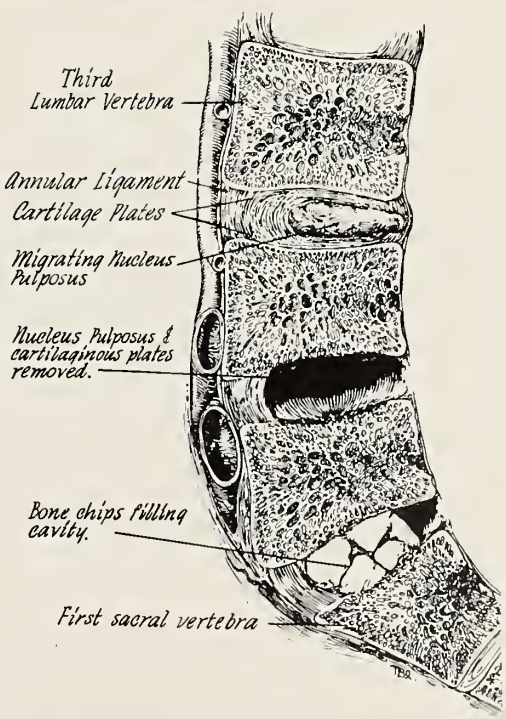


Figure 2.—At left side, exposure and decompression of nerve roots are shown preliminary to removal of diseased disc. On right side, bone chips are shown in position at fifth lumbar disc. Radical removal of nucleus pulposus and cartilagenous plates is shown at fourth lumbar disc. Migrating nucleus pulposus, which occurs in a small number of cases, is shown at third lumbar disc.

tion does or does not include fusion. The result in those cases, nevertheless, can rightfully be classified as satisfactory.

GENERAL IMPRESSIONS

From these experiences, certain definite opinions have been gained. When a multiple disc operation was done, the relief of back pain was much more rapid and permanent. When single fifth lumbar lesions were removed and the fourth on inspection thought to be normal, a small number of patients showed a tendency to some back discomfort on excessive stress. When the fourth was removed and the fifth left intact, a larger number had some back discomfort on excessive stress. Some of these patients were operated upon again because of recurrent severe pain, and the previously inspected disc, thought to be normal, was removed. Relief followed. Secondary operations have shown firm immobilization of the previously operated joint, and an abnormal disc was usually found at an adjacent level. In fourth lumbar disc removals, where there was a partial or complete sacralization of the fifth vertebra, this tendency has not been shown.

Spondylolisthesis, spina bifida, anomalous facets, etc., were among these cases, and the response to removal of the diseased disc or discs did not differ from the response in those cases in which the spines were architecturally normal. These abnormalities are asymptomatic in themselves but may predispose to disc disease. Often in the case of spondylolisthesis the affected joint was firm and the disc above was found to be responsible for the symptoms.

COMPLICATIONS

Transient urinary retention was the most common complication. It cleared in a few days and did not differ from the retention commonly seen in pelvic surgery. Quadriceps femoris weakness appeared in one case of lumbar 2 disc removal. Dermatomal hypalgesia was a frequent pre- and postoperative finding but did not contribute in any way to disability. In two cases of thoracic 12 disc lesions there was preoperatively a complete paraplegia. The paraplegia did not clear following operation. One elderly patient died from cerebral anoxia the third postanesthetic day. In this case no operation was done; on administration of the anesthetic, cardiac action stopped. It was started again approximately eight minutes later and the usual anoxemia reaction appeared. There were three cases in which there were troublesome wound infections which cleared promptly after removal of infected bone chips that were acting as foreign bodies. There were no surgical fatalities.

SUMMARY

1. Pathologic changes in the lumbar discs are one of the most common sources of low back pain. The vast majority recover without operation.

2. The literature indicates that in patients subjected to surgery 70 per cent or more are relieved by simple removal of the disc.

3. Approximately 80 per cent of patients suffering from disease of the discs can be recognized by the findings and clinical history, and spinal myelograms are not essential.

4. Patients showing a variation from the typical picture of disc disease should be subjected to spinal myelography.

5. Two hundred cases have been reviewed with respect to surgical indications, complications and final results.

6. Patient's consideration of litigation significantly alters the results in industrial cases.

7. There were no operative fatalities and the complications were of little consequence in almost all cases.

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QUESTIONS AND ANSWERS

DR. RANEY: My first question: "Will you discuss postoperative care after removal of intervertebral discs?"

Following the removal of one or more intervertebral discs, the postoperative care is in reality very simple. The majority of these patients after operation are allowed to assume any position they desire, except such positions that would throw stress and strain on the back. By the end of three or four days, or even earlier, the passive reclining position may be permitted and is often more comfortable. By the end of twelve to fourteen days the majority are allowed to get out of bed and are sent home, usually with some form of back support. Rarely, abdominal distention is encountered, and when it is it responds to standard symptomatic treatment. Urinary retention, which is common for a few days, can be managed either by catheterization at eight-hour intervals or with an indwelling catheter. The use of chemotherapy during catheterization prevents troublesome urinary infection.

Spasm of the muscles in the back and incisional pain are controlled by narcotics. If muscle spasm persists after three or four days, local heat is usually very beneficial. If it persists, as it does occasionally, for a few weeks after wound healing, rest and hot wet packs are very effective. If it persists beyond eight weeks, one should be suspicious of pathological changes in an adjacent disc.

After leaving the hospital these patients are instructed to avoid everything that may cause stress or strain to the back for a period of four months, since this is the minimal length of time required for healing. The majority of people require six to eight months for the development of a firm cicatrix and stabilization of the joint.

Question: "What percentage of cases of low back pain without sciatica are due to slipped disc?"

The term "sciatica" is a little broad and is often given by the patient as a complaint for any discomfort referred to the lower extremities.

In the case of pain radiating into one lower extremity from the low back, where it follows the anatomic distribution of one, two, or possibly three dermatomes, aggravated by stress or strain to the back, etc., it is my impression that almost all of these cases are the result of disc disease with either bulging or rupture of the structure and secondary encroachment on the regional nerve root or roots.

In this series of cases reported there were nine patients who at operation were demonstrated to have other lesions. Their pain was radicular in character, although it did tend to spread over a little wider area than one or two nerve roots. In these cases surgery disclosed spinal tumors, arteriovenous fistula, etc. It should be emphasized that where the entire sciatic nerve is involved, rather widespread

sensory and reflex changes will be found on examination, and rarely does a ruptured intervertebral disc cause such widespread involvement. Finally, our experience has led us to believe that the persistent recurring lower lumbar radicular syndrome in the vast majority of instances is the result of intervertebral disc disease with spinal root involvement.

REFERENCES

1. Aitken, A. P., and Bradford, C. H.: End results of ruptured intervertebral discs in industry, American Jnl. Surg., Vol. LXXIII, 3:365-380 (March), 1947.

2. Briggs, Henry, and Keats, Sidney: Clinieal experienees in the treatment of low back and sciatic pain associated with disorders of the intervertebral disc, Jnl. of the Med. Society of New Jersey, 43:13 (January), 1946.

3. Compere, Edward L.: Fusion of the spine after removal of ruptured disc, Jnl. Internat. Col. Surg., 9:14 (Jan.-Feb.), 1946.

4. Dandy, Walter E.: Advances in the treatment of ruptured (lumbar) intervertebral dises, Annals of Surgery, 118:639 (October), 1943.

5. Grant, Franeis C.: Operative results in intervertebral discs, Annals of Surgery, Vol. 124, No. 6:1066-1075 (December), 1946.

6. Jelsma, Franklin: Clinical analysis of 1,000 conseeutive cases of low baek pain with particular reference to sciatie pain causcd by extrusion of the intervertebral disc, So. Med. Jnl., 37:372 (July), 1944.

7. Magnusen, Paul B.: Differential diagnosis of causes of pain in the lower back accompanied by seiatic pain, Annals of Surgery, Vol. 119, No. 6:878-891 (June), 1944.

8. Peyton, William T., and Levine, Jules, D.: Posterior herniation of the intervertebral disc. An analysis of 65 cases, Minnesota Medicine, 27:263 (April), 1944.

Low Back Pain and Its Management by the General Surgeon

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THE general surgeon, particularly if engaged in Industrial Surgery, is frequently called upon to diagnose and treat patients with low back pain.

Low back pain is not an uncommon complaint and occurs in approximately 20 per cent of the industrially injured. However, emphasis must be placed on the fact that low back pain can be of constitutional as well as local origin. For accurate diagnosis and treatment, a complete history and physical examination supplemented by laboratory and x-ray studies are indispensable.

HISTORY

In recording the history, the type of pain, mode of onset and duration of the pain are noted. Particular significance is placed upon accurate localization of pain and the distribution of referred or radiating pain in relation to anatomical structures.

One should determine what body positions or attitudes benefit or aggravate the pain. Relief from pain and disappearance of muscle spasm on lying down generally implies that a postural or abnormal mechanical strain has been relieved from the lumbosacral or sacro-iliac joints. Low back sprains and strains, congenital anomalies and traumatic spondylitis should be considered when the patient gives a history of this type of static pain.

Morning pain, or pain which occurs after a period of rest, is usually found in inflammatory conditions. Trauma with superimposed inflammation, myositis, fibrositis and Marie-Strumpell's arthritis are conditions which would produce such pain.

Radicular pain, which is worse at night and ordinarily unrelieved by change of position, is usually due to disc lesions, tumors of the spinal cord and Marie-Strumpell's arthritis.

Constant intractable pain is usually seen in primary or metastatic tumors, some cord tumors and in some inflammatory processes involving the intervertebral disc.

One should inquire into the patient's previous history of back symptoms or injury and response to previous treatment. Such information is helpful in determining prognosis. The possibility of industrial injury or possible litigation should be determined at the time of the first examination. We are also interested in the previous health of the patient, foci of infection, preexisting arthritis, abnormalities of weight, and the possibility of chronic postural strains which may be related to the patient's occupation.

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PHYSICAL EXAMINATION

In examining the patient with low back pain it has been our routine to perform a complete detailed back examination with the patient fully unclothed. This is then supplemented with a thorough general physical examination. Unsuspected disease may at times be demonstrated elsewhere than in the low back. Such conditions may bear a significant relationship to the patient's complaint of low back pain either as a causative or aggravating factor.

The back examination is begun by careful inspection of the patient. This requires only a few seconds but yields valuable information. The patient's general body build in relation to body weight is noted, and his posture studied. Rounding of the shoulders, dorsal kyphosis, winged scapulae, increased or diminished lumbar lordosis, knock-knees, bow legs and pronation of the feet and ankles are looked for.

Further inspection is made for such visible abnormalities as pelvic tilting and prominence of muscle groups caused by spasm. If scoliosis is present an attempt is made to determine whether it is postural or structural and its direction is recorded.

Shortening of the trunk may be present and is suggestive of compression fracture, hypertrophic arthritis, spondylolisthesis, osteoporosis, Paget's disease, epiphysitis, and tuberculosis.

Ranges of spine motion are routinely tested in a standing, sitting and lying position, and any localized or generalized limitation of spine motion is recorded. The exact location and degree of pain is correlated with ranges of spine motion. If the limitation of spine motion is noticeable, it is well to measure the circumference of the chest in full inspiration and expiration. Cases of Marie-Strumpell's arthritis may reveal limited chest expansion as an early finding.

The exact localization of points of back pain and tenderness has proved to be of exceptional value particularly when correlated with specific underlying anatomical structures.

These localized areas of tenderness are usually to be found at ligamentous and muscular attachments, over the spinous processes of the vertebra and over the posterior superior spine of the ilium. With tenderness over the sacro-sciatic notch, one may safely say that such tenderness is most likely due to sacro-iliac sprain or disease.

Tenderness over the lumbo-sacral joint may often be seen with ruptured intervertebral disc and other types of lumbo-sacral lesions.

As a rule, localized tenderness means a lesion of that particular region, and generally points toward a muscular strain or sprain. Generalized tenderness

is indicative of myositis, fibrositis, or some type of generalized muscular lesion.

Spasm of the back musculature is frequently encountered and is often of a protective nature. Although it gives little indication as to the underlying pathological process, it is helpful in evaluating the acuteness of the condition. Voluntary muscle spasm as demonstrated by the malingerer must be differentiated from true involuntary muscle spasm.

Measurement of leg lengths may reveal the presence of a shortened leg resulting from abnormal development or previous trauma. Such inequality of leg lengths may produce pelvic tilt and scoliosis, and thus give rise to low back strain on the basis of altered spine mechanics.

Muscle atrophy in the back or lower extremities may be present and is often indicative of long standing backache of various types. When accompanied by radiation pain it is suggestive of cord or nerve root involvement. The presence of such atrophy should not be discounted. Muscle atrophy may be the cause for persistent symptoms and delayed recovery until muscle strength and tone is restored by proper exercise.

Neurological examination is often performed to eliminate such lesions as cord tumors, ruptured intervertebral disc or hypertrophied ligamentum flavum. When such a lesion is suspected the patient is referred for neurosurgical consultation. Spinal fluid studies and Pantopaque x-ray examination may reveal the location of the lesion and substantiate the diagnosis.

GENERAL SURGICAL CAUSES OF LOW BACK PAIN

There are many surgical conditions which may refer pain to the back. Only those which refer pain specifically to the low back will be discussed.

Carcinoma of the rectum with involvement of pelvic structures may refer pain to the sacrum as the outstanding or sole complaint. Penetrating carcinoma of the sigmoid colon may refer pain to the left lumbar region. Malignancy of the ascending, transverse and descending colon, after involving neighboring structures, commonly refer pain to the low back. During the past eight years I have detected unsuspected carcinoma of the rectum in five cases on routine examination. Low back pain was the chief complaint in each instance.

Diverticulitis, particularly with abscess formation may have pain in the low back as an accompanying symptom. This is true also of appendiceal abscess as well as pelvic and abdominal abscesses arising from other causes.

Patients with bowel obstruction may complain of low back pain as an accompanying symptom. The location of the pain varies with the site of obstruction. The severity of the back pain is usually proportionate to the completeness of the obstruction.

Less common surgical conditions which may refer pain to the low back are gastro-jejunal ulcer, advanced ulcerative colitis, Meckel's diverticulum, intra and extra peritoneal enlarged nodes, and other abscesses, cysts and tumors.

Metastatic malignancy of the spine from primary carcinoma involving the thyroid, breast, kidney, prostate and testicle is familiar to all of us as a cause of low back pain.

Abbott and Bost have previously described a low back pain syndrome resulting from unreduced, incarcerated or strangulated inguinal hernia. The low back pain is characteristically relieved by reduction or surgical excision of the inguinal hernia.

Other general surgical conditions such as lesions of the esophagus, stomach, duodenum, biliary tract, pancreas, and diaphragm which refer pain to the back, usually do so at a higher level and do not offer significant difficulty in differential diagnosis.

DIFFERENTIAL DIAGNOSIS

X-rays of 200 unselected cases with complaint of acute and chronic low back pain were reviewed. Only 38 per cent of these x-ray studies were considered normal, while 62 per cent demonstrated congenital anomalies or some form of osseous disease. (See Table 1.)

TABLE 1.—*Conditions Encountered in a Review of 200 Unselected Cases*

Anomaly or Disease	Percent Incidence
Hypertrophic Arthritis	26%
Articular Facet Anomalies and Pathology	15%
Spina Bifida Occulta	13%
Rheumatoid Arthritis	9%
Fractures of the Spine and Pelvis	8%
Scoliosis	8%
Six Lumbar Vertebra	7%
Narrowed Intervertebral Disc	7%
Articulating Transverse Processes	6%
Spondylolisthesis	6%
Epiphysitis	2%
Paget's Disease	0.5%

Conditions Encountered in Less Than 0.5 Per Cent of Cases But Not Encountered in a Review of 200 Unselected Cases

Hemivertebra
Osteomyelitis of the Spine
Brucellosis
Tuberculosis of the Spine and Sacro-iliac Joint
Syphilis of the Spine
Benign Tumors of the Spine
Primary Malignancy of the Spine
Metastatic Malignancy of the Spine
Multiple Myeloma

I would like to indicate briefly some of the more common anomalies and forms of osseous disease which must be considered in the differential diagnosis of low back pain.

Hypertrophic Arthritis of the Spine. Characteristic marginal lipping and osteophyte formation is present. This condition occurred to a significant degree in 26 per cent of our cases.

Marie-Strumpell's Arthritis. Both sacro-iliac joints, as well as the apophyseal joints, show narrowing of the joint spaces due to articular cartilage destruction. Dense subarticular bone sclerosis, bone atrophy and fibro cystic changes, are demonstrated. This condition usually develops in adults under 40 years of age. Flexion deformity may develop and the disease may

terminate in fibrous or bony ankylosis. Marie-Strumpell's arthritis occurred in 9 per cent of our series.

Spina Bifida Occulta. This is one of the most common congenital anomalies of the spine. It occurred in 13 per cent of our cases. There is lack of fusion of the lamina of the 5th lumbar and first sacral segments. This renders the lumbo-sacral joint unstable and thus predisposes to strain.

In addition to the spina bifida occulta, variations in size, shape and position of the articular facets may be demonstrated. Such facet changes may allow unnatural and excessive movements of the vertebrae and predispose to strain. Facet abnormalities were found in 15 per cent of our cases.

Sacralized Transverse Processes. This condition may be unilateral or bilateral and may be fused or articulating. If unilateral it is particularly apt to render the function of the lumbo-sacral junction asymmetrical and thereby predispose to strain. This anomaly was found in 6 per cent of our cases.

Spondylolisthesis. Spondylolisthesis is commonly associated with a traumatic or congenital defect involving the pedicles of the 5th lumbar vertebra. This allows the lamina and articular facets to remain in normal relation to the sacrum while the body of the 5th lumbar vertebra displaces forward. This condition occurred in 6 per cent of our series. Narrowing of the intervertebral space is present, and usually occurs at the lumbo-sacral joint. Significant narrowing of the intervertebral space occurred in 7 per cent of our reviewed cases.

Six Lumbar Vertebrae. This condition occurred in 7 per cent of our cases. If unaccompanied by other congenital anomalies it probably plays little part in the development of strain.

Hemi Vertebra. This condition is manifested in incomplete development of the vertebrae. Malalignment results, which produces a potentially weak back on the basis of altered spine mechanics. This condition was not encountered in our series and occurs in less than one-half of 1 per cent of cases.

Structural Scoliosis. Roto-scoliosis may develop on the basis of a congenital tipping of the sacrum. Scoliosis of structural or postural type occurred in 8 per cent of our reviewed cases and must be considered as a cause of low back symptoms.

Epiphysitis. Irregular articular margins with irregular areas of epiphyseal calcification may be present with slight wedging of the vertebral bodies with increasing dorsal kyphosis. Epiphysitis begins in adolescence and is characterized by pain and stiffness in the spine and an increasing dorsal kyphosis. This condition occurred in 2 per cent of our series.

Compression Fracture of the Second Lumbar Vertebra. Fractures of the vertebral bodies occurred in 6 per cent of our cases.

Fractures of the Transverse Processes. Fractures of the transverse processes are not considered as serious as fractures of the vertebral bodies. Treatment and recovery are ordinarily comparable to that of a severe sprain. However, prognosis must be guarded.

All other fractures of the spine, sacrum, coccyx and pelvis not including the vertebral bodies occurred in 2 per cent of cases.

Paget's Disease of the Spine. There is osteosclerosis of the vertebral bodies with thickening of the trabeculae and irregular areas of rarefaction. The cortex is hypertrophied and thickened due to new bone formation on its surface. This produces a fuzzy or cotton wool appearance and increases the diameter of the bone. Paget's disease occurred in one-half of 1 per cent of our cases.

Tuberculosis of the Spine. There is subarticular erosion and absorption of the vertebral body with calcification and abscess formation anteriorly. The intervertebral disc space is involved early and shows narrowing. Tuberculosis occurred in less than one-half of 1 per cent of our cases.

Syphilis of the Spine. Very dense white bony proliferation may be noted, particularly about the joints, with eburnation and fragmentation of the vertebral bodies. The relatively few symptoms are in marked contrast to the extensiveness of the disease of the bone. The history and a positive Wassermann help to make the diagnosis. This condition was not encountered in our review of 200 cases, but was encountered in one instance during the past year. It must be considered in the differential diagnosis of low back pain.

Giant Cell Tumor. Although rare, it is the most frequent benign tumor encountered. It is characterized by expansion of the bone by a vacuolated appearing tumor with prominent trabeculae. It is to be differentiated from bone cyst. Hemangioma, another benign tumor is also seen infrequently.

Primary Sarcoma. This may be manifested as an osteolytic lesion. There is absence of bone regeneration because of rapid growth of the tumor. Primary sarcoma of the spine is rare and was not encountered in our reviewed series.

Multiple Myeloma. The normal bone structure of the spine and pelvis is replaced by irregular punched-out osteolytic lesions. A positive test for Bence-Jones protein in the urine helps to make the diagnosis. This disease is rare. Multiple myeloma was not encountered in our present series of 200 cases but was found to be the cause of low back pain in one of our cases during the past year. It must be considered in the differential diagnosis of low back pain.

Metastatic Malignancy of Breast Origin. Metastatic malignancy although occurring in less than 1 per cent of cases is the most commonly occurring tumor of the spine. Carcinomas of the breast, prostate, thyroid, kidney and testicle may metastasize to the spine.

TREATMENT

Experience has taught us that the majority of patients suffering from low back pain, including those with sciatic nerve pain, will recover completely under a conservative plan of treatment.

If the patient localizes his pain or tenderness to one or two specific points, these areas are often in-

jected with Procaine Hydrochloride solution. This procedure is usually reliable in differentiating referred pain arising from local sprains or strains from true radiation pain resulting from cord or nerve root lesions. From a therapeutic standpoint it has also proved its effectiveness. It is not an unusual experience to obtain complete clearance of a patient's low back pain and positive objective findings with one or more such injections.

Only those patients suffering from mild degrees of low back pain are treated as ambulatory patients. Diathermy or infra red lamp heat is applied to the low back and this is supplemented by gentle massage and postural exercises. Adhesive strapping is frequently used for additional support. Codeine and aspirin are prescribed freely for relief of pain. The patient is instructed in a regimen of home treatment. This includes local heat, massage, corrective exercises, boards under the mattress, and avoidance of heavy lifting, stooping, and driving.

All patients demonstrating marked pain and spasm in the low back and particularly those with sciatic scoliosis are routinely hospitalized. They are treated by complete bed rest on a firm mattress supported by fracture boards. Buck's extension is applied to each leg with five to eight pounds traction. The lumbar spine is flattened and the hips are flexed 30 degrees or more. Such traction with the low back flexed is particularly applicable in cases of suspected rupture of the intervertebral disc. Heat and gentle massage are instituted early to relieve pain and muscle spasm. When this is accomplished, postural exercises are started under a trained physiotherapist to strengthen the back and abdominal musculature.

Unless satisfactory subsidence of pain and tenderness is realized in approximately seven to ten days time, the patient's spine may be gently manipulated. This may be performed with or without anesthesia, depending upon the amount of relaxation desired. Manipulation is not performed in cases with marked arthritis, spondylolisthesis or ruptured intervertebral disc. Ordinarily the patient is treated intensively in the hospital until symptoms are improved and spasm has subsided. Discharge from the hospital, however, does not terminate treatment. Physiotherapy, exercises to strengthen the back and abdominal musculature and a rigid regimen of home treatment are continued until the back symptoms and findings have completely cleared. Belts, braces, and casts, although used infrequently by us, have a definite place in the treatment of low back pain. The prolonged and indiscriminate use of belts, braces, and casts may produce muscle atrophy and joint stiffness. To avoid the development of a chronically weak back we supplement their use with postural exercises whenever possible. We dispense with the use of belts, braces and casts as soon as the back condition permits.

Using a similar plan of conservative treatment, Kuhn of Boston found that 77 per cent of 1,000 cases suffering low back pain alone, and 79 per cent of 449 cases suffering low back pain with sciatica, recovered completely. In his series, symptoms persisted for an average of 48 days, with disability ranging from one week to ten months.

SUMMARY

A complete history, physical examination, x-rays and laboratory studies are indispensable for accurate diagnosis and treatment of low back pain.

Patients suffering low back pain will demonstrate some form of anomaly or osseous disease by x-ray studies in the majority of cases. These abnormal findings must be carefully evaluated as they may be, but are not necessarily, related to the patient's low back complaints.

The great majority of patients suffering low back pain with or without sciatic pain will recover under a conservative plan of treatment. Where conservative treament is not indicated or has not been successful the patient should be referred to an orthopedist or neurosurgeon for more specialized diagnosis and treatment.

One should bear in mind that some general surgical lesions may produce low back pain as a cardinal symptom. It must never be forgotten that low back pain may be the presenting symptom in entirely unsuspected malignant disease of the rectum, sigmoid colon and other pelvic structures. Any patient with unexplained low back pain who has not had this possibility fully explored has not been completely examined.

Back Pain From the Gynecological Standpoint

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MANY gynecological complaints lend themselves to relatively easy evaluation and institution of proper therapeutic measures. Unfortunately, the complaint of "backache" does not often fall into such a group. Backache as a symptom is all too frequently difficult to evaluate, its origin is apt to be obscure, and the therapeutic measures used are many times ineffectual.

The exact mechanism by which pain is produced and the anatomical pathways along which the afferent stimuli travel are always of interest. Suffice it to say that at the present time no completely satisfactory explanation of these factors is possible. Inasmuch as back pain due to pelvic disease has been relieved by severing the second, third, and fourth sacral nerves, it has been inferred that afferent fibers must run through these trunks although they have not been adequately demonstrated. Likewise, it is felt that there must be afferent fibers, the so-called viscero-sensory nerves, running upward through the sympathetic chain with a resulting referred type of pain to the sacral area, but again positive proof is absent. This lack of anatomical knowledge causes us to fall back on clinical observation and experiences; i.e., given a patient who has a pelvic lesion and who likewise complains of back pain, we know that appropriate treatment for the specific lesion will in some cases relieve the complaint of backache. All too often, however, the back pain has little or no connection with the condition of the pelvis, and a careful orthopedic, urological, or neurological examination will uncover the true cause for the discomfort. Greenhill [2] states that "the backache in less than half of all women is due to disturbances in the pelvic organs or to abnormalities in the kidneys." This is in agreement with most other careful observers. It is likewise generally held that back pain of pelvic origin is fairly definitely localized to the sacral area and that pain above this region is not due to pelvic pathology. The entities that are associated with this type of back pain can best be discussed by grouping them into appropriate headings.

Back pain due to abnormalities of position. It is unfortunate that the gynecologist's viewpoint concerning the significance of a retroflexed or retroverted uterus is not more widely understood. A uterus that is normal in size, shape, and mobility but which has assumed a retroposition practically never gives rise to back pain. This fact has been established by gynecologists by observing the large number of women who have a completely asymptomatic retroposed uterus, along with the disappointing results in the follow-up observations on women who have had suspension operations done for the supposed cure of backache. A rather graphic chart was published by Miller [3] showing the incidence of operative correction of retrodisplaced uteri at the University of Michigan Hospital since 1901. At that time 75 per cent of the patients seen with retrodisplaced uteri were subjected to an operative procedure to correct this condition. Thirty years later, that is, in 1931, the incidence of operative procedures had dropped from 75 per cent to 0.9 per cent. A similar curve could be compiled from any major center in the country. There remains the very occasional case where the cause-and-effect relationship will hold true and this can readily be ascertained by resorting to the use of a properly fitting pessary. If symptomatic relief is obtained with the uterus held in an anteflexed position and if the retroposition and pain return when the pessary is removed, the possibility of operative measures can be considered.

It is an infrequent occurrence for patients who have a marked relaxation of the vaginal introitus to have backache as a chief complaint. When it is a predominant symptom, one should be very cautious in promising relief following the correction of the relaxation.

A third type of abnormality of position is that associated with a prolapsed ovary. This condition, at times, seems to be the cause of dyspareunia with an associated recurring dull back pain. Again, it is rare to have this latter back pain as the presenting symptom, and many times one will find an associated postural state that will be primarily responsible for the symptom.

Back pain due to inflammatory states. A chronic cervicitis, particularly where a boggy, hypertrophic cervix is present, will cause not only the local symptom of leukorrhea but not infrequently will be responsible for an associated inflammatory reaction in the pelvic lymphatics, particularly along the course of the uterosacral ligaments. When this latter condition is present, as evidenced by thickening and induration along with pain and tenderness of the uterosacral ligaments, it is often that we find the patient presenting herself with back pain as one of the predominant symptoms. It is gratifying to find how many of these patients will respond to appropriate local therapy in the form of hot douches or cauterization of the cervix. Occasionally amputation of the infected cervix will be necessary before a cure can be obtained.

In the group of patients who present themselves with evidence of inflammatory involvement of the upper generative tract, be it acute or chronic, it is not uncommon to find that one of their complaints will be that of backache. On the other hand, it is rare to have this as the chief complaint. In the differential diagnosis between acute pelvic inflammatory

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disease and appendicitis, it has been stated by Boyce [1] that the presence of backache is extremely suggestive of the former diagnosis, inasmuch as he found it extremely uncommon for an acutely inflamed appendix to give rise to this symptom.

In the group of patients with chronic pelvic inflammatory diseases, it is frequently possible to obtain a history of dull, nagging, low lumbar or sacral pain. It is likewise true that in the vast majority of such patients the back pain will be due to an associated orthopedic condition, such as poor posture, and if we limit our attention solely to the pelvic status we will be disappointed in our results. However, it is true that with a small number of patients the back pain may be definitely due to the pelvic lesion, particularly if there are adhesions present between the posterior parietal peritoneum and the adnexa or uterus.

Back pain due to tumors and cysts. It is a surprising thing how rarely we find back pain that can definitely be ascribed to the presence of even quite large pelvic tumors or cysts. There may be an associated complaint of backache but if relief is promised with the removal of the tumor, the incidence of failures will be high. Occasionally the pull or stretching of the pedicle of an ovarian cyst will be associated with backache, although it is more common to find that the pain is localized in one or the other adnexal areas. Myomatous tumors of the uterus practically never cause back pain unless there be an associated pelvic inflammatory condition with the presence of adhesions.

Malignant tumors of the pelvic organs will occasionally result in back pain, either from direct extension into the surrounding tissues or from metastasis to the lumbar spine or sacral area.

Back pain due to Endometriosis. One of the most distressing conditions that gynecologists are called upon to treat is that of endometriosis. Undoubtedly the most characteristic symptom of this disease is that of a gradually increasing amount of dysmenorrhea, and the patient is apt to describe the pain as being cramp-like in nature and located deep in the pelvis. There will be times, however, when back pain will be a predominant symptom. In such cases one is apt to find that the posterior surface of the uterus and the cul-de-sac are involved to a considerable degree in the endometriotic process and that there are dense adhesions running to the rectum and the posterior parietal peritoneum. If the process is limited to the ovary alone in the form of the so-called "chocolate cyst," one practically never finds sacral pain to be an important feature of the case.

Back pain in association with pre-menstrual tension and/or dysmenorrhea. A frequent complaint of women during the child-bearing period is that of increased nervousness and restlessness which will appear a few days before the onset of each menstrual period and which is relieved following the commencement of menstrual bleeding. These complaints seem to have no correlation with the presence or absence of menstrual cramping or dysmenorrhea. However, it is not uncommon for these patients to have an associated dull, low back pain during this period of tension. The cause of the back pain is difficult to determine but it may be due to congestion as a result of an increased pelvic circulation and an associated edema of the pelvic tissues. Relief of this syndrome is not always easy. Ammonium chloride in a dose of one gram three times a day during this period may be helpful. Patients who fail to obtain relief from this therapy may sometimes be helped by small doses of testosterone or occasionally by the use of progesterone.

Back pain in association with dysmenorrhea is uncommon unless there be evidence of actual pelvic pathology present, such as inflammatory disease or endometriosis. With these patients the back pain is apt to be inconsequential compared with the lower abdominal cramp-like or colicky pains, and whatever therapy is necessary to relieve the latter almost surely will afford relief for the back pain.

Back pain due to psychogenic states. It is always a difficult decision to reach when we wish to ascribe the back pain to a psychogenic origin. Certainly, every organic cause, not only gynecological but also orthopedic, urological, and neurological, must be ruled out, and this can be both time-consuming and expensive. When such a diagnosis is established the results of therapy depend on several things—the duration and degree of the fixation, the etiology of the mental state, and the ability of the investigator. These patients not uncommonly will complain of being "tired all over," or of extreme nervousness and tension. Sargent [4] recently pointed this out, along with the fact that back pain due to organic disease is often prolonged due to psychogenic causes. By keeping this possibility in mind, and by asking for psychiatric help when it seems indicated, we can relieve many of these chronic invalids who otherwise would remain a source of concern, not only to themselves and their families, but also to their physicians.

SUMMARY

It is obvious from what has been said that the association between the symptom of back pain and actual pelvic pathology is difficult to evaluate. This very fact makes for unsatisfactory therapy in many instances. By obtaining a careful history and by doing a complete physical examination—not simply limiting oneself to a pelvic examination alone—one can improve his clinical results considerably. It is generally recognized that abnormalities of position of the pelvic organs very rarely will give rise to backache. If the pelvic pathology is such that congestion or edema of the tissues has occurred, or if adhesions within the pelvis are present, there is more apt to be a cause-and-effect relationship than if these conditions are lacking. Even so, one should not overlook the possibility of an associated orthopedic, urological, or neurological condition which might be the real cause for the patient's complaint. Hence, a guarded prognosis will result in fewer disappointments, not only for the patient, but also for the doctor.

QUESTIONS AND ANSWERS

CHAIRMAN BOST: "Dr. King, what is your treatment of endometriosis in the young child-bearing woman?"

DR. KING: This is hardly the place to take up what can be a very complex problem. There are several factors that must always be considered: first, that although we know that complete removal of the ovaries will promptly stop the progression of the endometriosis, we are extremely reluctant to do this procedure in a young woman; secondly, although her chances of a pregnancy are definitely decreased, we appreciate the fact that if she should become pregnant this may result in a marked improvement because the prolonged period of amenorrhea gives nature a chance to heal over some of the endometriotic areas in the pelvis. A third factor that always colors the picture is an estimation of the extent of the process and the degree of disability that the patient is having.

Surgical approach always presents the problem of trying to conserve as much ovarian tissue as possible and yet removing enough to control the endometriosis. Isolated areas of endometriosis on the pelvic peritoneum may many times be cauterized with gratifying results.

If the symptoms again become severe after surgery has been tried we sometimes make use of sterilizing doses of deep x-ray therapy rather than subject the patient to another laparotomy. Recently, we have been using more and more testosterone for the medical treatment of these patients, and it is amazing how many times these patients will obtain complete symptomatic relief and definite regression of the endometriosis with this therapy.

REFERENCES

1. Boyce, F. F.: The diagnostic confusion between acute appendicitis and pelvic inflammatory disease, New Orleans Medical and Surgical Journal, 96:303 (January), 1944.

2. Greenhill, J. P.: Office gynecology, Fourth Edition, The Year Book Publishers, Inc.

3. Miller, N. F.: Backache, In Davis Gynecology and Obstetrics, Vol. III, Chapter 13.

4. Sargent, M.: Psychosomatic backache, New England J. Med., 234:427 (March 28), 1946.

Pyloric Stenosis Not a Disease of "First-Born"

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IN practically every article on Congenital Pyloric Stenosis the reader will find in about the second paragraph under the heading of "Incidence" the statement, "Pyloric stenosis is a disease of the 'first-born' male," or "It is a disease of the 'first-born'." For example Ladd, Ware and Pickett writing in the *Journal of the American Medical Association*, June 22, 1946, page 647, make the statement "Pyloric stenosis is reported to occur more frequently in the first-born of a family, averaging 50 per cent to 60 per cent of the cases in most series. Our own figures bear this out, as our patients represented first births in approximately 55 per cent of the cases."

Similar statements could be extracted from many articles, but the foregoing is the most recent. After careful study of a personal series of 146 patients, this point seemed worth investigating. In our patients, insofar as information is available from the records, the following figures are derived: first born, 64.6 per cent; second born, 18.2 per cent; third born, 13.6 per cent; fourth born, 3.5 per cent.

From these figures, consequently, one would be justified in drawing the conclusion that the disease was certainly most prevalent among the first-born. However, is it correct? Actually it is not!

In "Recent Social Trends" Volume 1, page 661, et seq., published by the President's (Hoover) Research Committee in 1933, the average American family had 1.01 to 2 children. In the United States Department of Commerce report, Series Ca-3, No. 3, page 19, of August 1944 of the San Francisco Bay area, which refers to children under ten years of age, it is found that the ratio of first-born to second-born to third-born is as 94:50:18. In the Los Angeles area the figures are similar. We are indebted to Doctor C. C. Berwick, of the Metropolitan Life Insurance Company for these figures.

What do these figures mean? They mean that the average American family with children has each about 1½ children. This means that two families have 3 children, and that the incidence of "first-born" children in these two families is 66 per cent, or two out of three. If one were to belabor this point to the second-born, third-born and fourth child, a corresponding decrease would be obtained. The figure 66 per cent is in striking agreement with our figure of 64.6 per cent. It must be remembered that by and large 50 per cent of children are boys. Our series shows that the disease, boys:girls, is as 5:1. Therefore every sixth child born should be disregarded, as being a girl, and consequently not as susceptible to this disease. The pertinent fact remains however, that it is the size of the family that determines the prevalence of pyloric stenosis among the first-born. By the same argument, if one were to analyze the incidence of acute appendicitis, one would probably find that it affected some 60 per cent of the first-born, 18 per cent of second-born, etc., just because that is the ratio in which these individuals occur "free in nature." There is, therefore, no evidence at all to support the statement that pyloric stenosis is a "disease of the first-born."

The disease seems to be quite sporadic in its occurrence. We have had families of four children, with three involved, and these three were not three consecutive children. We have seen identical twins both affected, and we have seen identical twins in which only one was affected. We have seen another family in which the condition developed in several generations.

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GRANULOMA INGUINALE

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THE increase in the negro population in California has been accompanied by a greater incidence of granuloma inguinale, a disease which heretofore had been considered a medical rarity in this area. Since most medical texts stress the inguinal manifestations of this disease rather than the earlier genital lesions, many cases have not been recognized promptly or have been confused with other venereal diseases.

Granuloma inguinale became a reportable disease in California in 1938. A review of Table 1 reveals that there has been a steady increase in the number of reported cases since that year. Eight cases, all negroes, were seen at the Oakland City Clinic in a period of six months. With the exception of one case, all of these patients presented lesions confined to the genitalia alone.

Table 1.—*Civilian and Military Cases of Granuloma Inguinale Reported in California for the Years 1938 Through 1945*

	California	
	Civilian	Military
1938	—	—
1939	3	—
1940	16	—
1941	29	1
1942	22	8
1943	22	12
1944	23	8
1945	43	17

Note: Granuloma inguinale was not reportable before 1938.
Source: Morbidity Report Cards: January 1939 through 1945, California State Department of Public Health.

Although granuloma inguinale is a disease found primarily among negroes in the United States, about ten per cent of the cases reported in the past occurred among members of the white race. The accepted etiological agent is the Donovan body. This organism is now considered to be bacterial in nature rather than protozoan as had been believed heretofore.

The disease usually begins with a vesicle, papule, or nodule on the preputial orifice, the labia minora, or the vaginal wall. The surface of the original lesion becomes excoriated or eroded leaving an ulcer with a red beefy granular base. The margins are sharply defined, and in most instances, everted. The lesion bleeds easily upon trauma, such as would occur while obtaining a specimen for darkfield examination. The original lesion is usually followed by one or more "daughter lesions" which may coalesce to form extensive ulcerative processes. There are usually no premonitory symptoms or constitutional upsets.

From the Division of Preventable Diseases, Department of Public Health, Oakland, California.

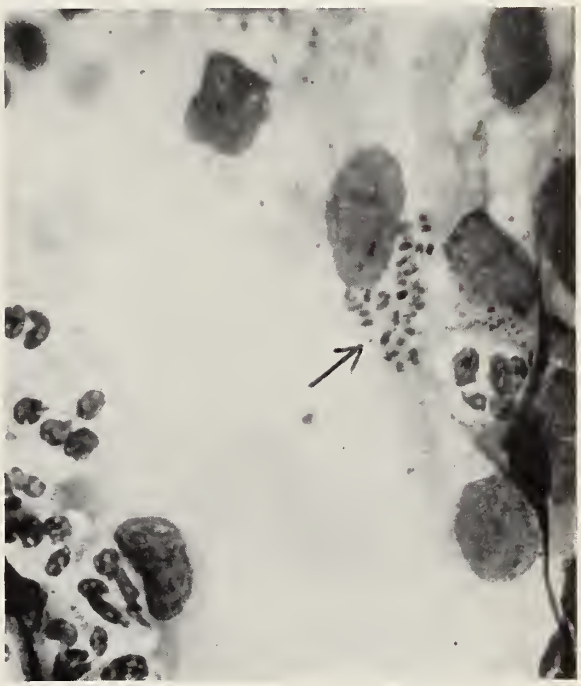


Figure 1.—Donovan bodies within cystoplasm of monocyte X117.

One of the important characteristics which is of great assistance in the differential diagnosis of lesions on the external genitalia, is that of the great chronicity of the lesions in granuloma inguinale. Many patients give a history of the spontaneous disappearance of the original lesions with a subsequent recurrence. It is not uncommon, however, to have a patient state that the granulating lesion or lesions have been present for many months, without progression or recession.

Most textbooks describe the inguinal lesions adequately but it must be stressed that these are relatively late manifestations of granuloma inguinale and not the early lesions. It has been our experience that although the disease is easily recognized by most physicians when it has extended to the inguinal region, many do not associate genital lesions with granuloma inguinale.

Unless syphilis complicates granuloma inguinale, the serological tests for syphilis are negative. The Ito and the Frei skin tests are also negative unless the patient has or has had chancroidal disease or lympho-granuloma venereum in the past.

The diagnosis depends on the demonstration of the pathognomonic Donovan bodies in spreads which are prepared by crushing curetted material from the lesions between glass slides. The Donovan body, which can be stained with Wright's or Giemsa stains, may be found extracellularly or within the cytoplasm of the large monocytes. These bodies look like a closed safety pin due to their elongated ovoid shape and intense bipolar staining reaction. (Figure 1.) Once seen they can hardly be mistaken in future examinations.

The disease usually responds favorably to antimony compounds. Fuadin is considered to be the drug of choice.* Sulfonamides and penicillin do not affect the progression of the disease.

SUMMARY

The incidence of granuloma inguinale has been increasing in California in recent years. Textbooks fail to stress the initial genital lesions hence leading to a great delay in the diagnosis. The disease is exceedingly chronic and responds favorably to antimony compounds. Fuadin is considered to be the drug of choice in treating the disease.

* Since this article was submitted for publication, Greenblatt et al reported favorable results from the treatment of granuloma inguinale with streptomycin in J. Ven. Dis. Inform., 28:183-189, Sept., 1947.

The Family Physician and Medical Education

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A MEDICAL educator expressed a need by saying, "What we should have is a pediatrician for adults." The same thought was implied in a newspaper carrying a headline on "aged orphans." The present resurgence of interest in the general practice of medicine reflects the same thought. In other words, the disappearance of the old family physician is being felt.

Viewed not economically but basically, individuals and families need a health and welfare counselor. In the few areas where he is located and for the small per cent of families that he reaches, the pediatrician serves as such a counselor. He not only takes care of the sick, but he guides the health of the well, he does preventive work, he counsels on the mental and emotional development, and he advises the family on medical aid and consultants. But only the large centers have pediatricians and in these areas pediatricians serve only a part of even the childhood population—thus the comment on the need of a pediatrician for adults.

How this need is to be met is a question which concerns medical education, the health of the Nation, and the survival of the private practice of medicine. Medical education in this Nation has made extremely rapid strides, but as Allen has pointed out in "Medical Education and the Changing Order," time should be given now to evaluation of what has been learned and the practical application of this knowledge for the good of all. Medical education has developed along longitudinal lines in that it has been departmentalized into medicine, surgery, obstetrics, and pediatrics and these in turn into subdivisions. The trend has led to extreme specialization. Those students who have not wished to pursue a specialty have been given scant attention, which in itself casts some aspersions on the group interested in general practice.

There is another way to look upon medical education, namely in cross-section. From this viewpoint medical schools should furnish the Nation with (1) medical teachers, to continue the educational process, (2) research workers, also an essential part of a progressive health program, (3) specialists as heretofore, (4) public health personnel, a field unique in itself, and (5) physicians trained in the science and art of practice. It should not be extremely difficult to determine approximately the number of physicians needed in each group and their percentage of the whole. This knowledge should be part of the information given students in order that both faculty and students, during the undergraduate training, could choose and select intelligently and according to fitness the best material for each field.

The training in the science and art of practice, at present a largely neglected part of medical education, should be developed along the lines of present pediatric training adapted to all age periods. The family physician should be well trained, but he should know his own limitations, and he should have access to continuation studies. The medical or technical part of his training should include internal medicine, pediatrics and obstetrics. Surgery at first should be limited to minor problems and extended in its practice only gradually, as is now done in pediatrics. Most pediatricians do little surgery, limiting themselves to repair of minor cuts and bruises, lesser degree burns, etc.; a few have taken surgical training and extended this to tonsillectomies, fractures and so on, depending on their qualifications by training. It certainly should be expected that many physicians in general practice would desire to extend their

surgical experience, or desire to specialize. In fact it would seem highly desirable that specialists should come largely from those who have had a background of a few years of general practice.

Limitation of practice means, however, that there must be an established and easily accessible route of reference to specialists of problems beyond the practitioners' training. The recent war has revealed our ability to organize specialty centers and provide transportation to them even from remote areas of the world. This experience should be utilized in civilian life. Every geographical area should have its medical center equipped to do diagnostic and therapeutic work for the surrounding communities. The number of centers, as well as the type of transportation indicated, is dependent upon the population, terrain, climate and similar factors, problems that differ markedly in various parts of the United States and need to be solved on a local or regional basis. Judging by a pediatric practice, the number of patients requiring reference to specialists outside the field constitutes a relatively small percentage. The completion of the Study of Child Health Services now in progress should reveal at least approximately what this figure is. In adult or general practice it should be somewhat comparable.

In a field as vast as medicine, it is impossible to be an authority or specialist in all branches, and recognition of limitations in general practice is essential to safe practice. The greatest weakness in our present system is the prevalent attitude that the license to practice medicine and surgery when applied to general practice gives the individual, regardless of lack of training, a right to do everything. Specialists have the same license but refrain from using it.

CONTINUATION STUDIES

The other basic need of the family physician is access to continuation studies. Only a few medical schools or centers have established a relationship with the practicing physicians of the surrounding community which makes the acquisition of new knowledge and new techniques a pleasure and aim. A good and mutually respected relationship between medical educators and practicing physicians is the crux of the entire problem and this relationship can never be acquired under conditions of antagonism or disrespect. The advancements in medicine are so rapid that there must be established means for keeping abreast of the newer knowledge by those not immediately associated with research centers. Medical literature furnishes one valuable means, but the written word becomes difficult to evaluate by one's self. So-called refresher or continuation courses at a medical school offer the best opportunity, if properly organized and planned, to discuss and evaluate newer knowledge. Courses organized for practicing physicians should be conducted apart from the undergraduate work, and with a carefully selected faculty. Full-time teachers of undergraduates are prone to adopt a method not suitable for seasoned practitioners. Volunteer clinical instructors are less apt to talk down to a class or group of practicing physicians.

Diagnostic problems encountered at a local level can be excellent teaching material if the medical center cooperates with the referring physician by presenting him with a complete report on the case and referring the patient back to the local physician for continuation of observation and therapy. Unfortunately this is often not done and the local physician feels that by referring the patient, he completely loses contact with him. This, in turn, in the eyes of the community reflects on the local physician's ability and destroys confidence in him. It might be added that if referred cases are made the subject of medical papers by a university faculty member or group, credit given to the referring physician would seem courteous (if not a medical Emily Post must) and would enhance good relationship.

Visiting speakers to local medical societies or discussion groups help in continuation study, and this purpose is similarly served (and the community welfare aided) by cooperation with a visiting research worker or epidemiologist in some community epidemiological problem.

The art of practice is probably a little more difficult to teach than the science, but instruction along some fundamental lines should greatly aid the practitioner. Some training in psychiatry and psychology is important and the tendency to incorporate much of this instruction into the other branches of science and teach it at the bedside is a valuable training, already noticeable in the attitudes of hospital house staffs.

TRAINING IN COOPERATION

A second important training should be in teamwork. Unfortunately doctors have been inadvertently taught to be and are considered to be individualists, even prima donnas. If the medical school is the parent to whom the physician returns for help and guidance, then the medical confreres in the community should be brothers. The integrity of the individual physician cannot be maintained and the welfare and health of the community cannot be forwarded if extreme individualism is pursued. Failures of teamwork have resulted in small private hospitals or nursing homes barred to other physicians in the community and resistant to the establishment of a well equipped community hospital. Lack of teamwork means the failure to maintain medical societies, medical rounds, clinical conferences and discussion groups, all of which contribute so much to the advancement of knowledge in the science of disease. This lack of cooperation between doctors of a community is a grave reflection on the medical profession and the source of serious criticism by lay people.

PUBLIC AND PRIVATE AGENCIES

Finally, the art of practice should train the physician to cooperate with the public and private agencies in a community. The pediatricians, although perhaps inadequately, have set an example. It is practically impossible satisfactorily to practice pediatrics and not soon learn that the help of other agencies is needed. The public health system, if properly func-

tioning, removes from the physician the burden of worrying about water and milk supply. Public health is concerned with housing, accidents, pest control, statistics, school buildings and innumerable matters of which the practicing physician is not even aware but which are essential to health and welfare. Sometimes public health officers clash with private practice in attempting too much to direct the patient, but the very clash helps to keep both parties functioning at their best.

The state and its institutions are needed for the custodial care of the feeble minded and other unremediable problems. The private agencies are sought for help in convalescent care, placement of orphans, and in many other ways. Most of these problems or similar ones belong to all age groups, for dependency is not entirely a matter of age. Geriatrics can learn from pediatrics that rehabilitation, occupational therapy, and guidance are as much a necessity in the home for aged as in an institution for children. Salvaging of old age is an exceedingly interesting project and one of increasing importance. Talent and experience are sometimes shelved by an artificial retirement age, which alone is a challenge. The most interesting and gratifying part of the practice of medicine can be the counselling of individuals, families and agencies in a community. In this cooperative way the general level of health can best be raised. This, as well as the care of the sick, was the former function of the family physician.

If the medical educators and the practicing physicians will again appreciate the importance of the family physicians, the men and women who are the terminal sensory organs in the health system, the private practice of medicine will not be jeopardized. And, for continued progress of medicine it must not be jeopardized.

Only a very few know the full danger to our medical progress of a completely socialized health program. On paper and in theory it looks and sounds ideal, but in experience, in medicine as in any other field, complete (though dependent) security, regular hours, lack of personal responsibility, lack of stimulation gradually undermines even the most conscientious physician and the result is lack of courtesy to the patient, delay in care, shifting of responsibility, with the end always stagnation and retrogression. It must be recognized that doctors are fallible, that when effort is no longer necessary, progress ceases. Competition, mutual criticism, sparring and a certain slight sense of insecurity are always a part of private practice and are the necessary lash that fallible human nature needs in its climb toward a better civilization. This is no different in medicine than in government. Totalitarianism in either is objectionable for the same reason. A two-party system, public and private, is as necessary to better medicine as it is to better government.

The Western States should recognize that the problem in the sparsely populated areas is somewhat different than it is in congested small states of the East. Even if groups of specialists might be considered there, it would be impossible to meet the Western needs in that same way. Distances make it imperative that individuals do a high percentage of the work in outlying small communities, but it is equally imperative to good medicine that transportation and diagnostic and therapeutic centers be so established that rapid transfer of patients can be accomplished when indicated.

SUMMARY

In order to establish a program of health that can eventually reach all the people, the general practitioner is an essential member. Medical education must recognize the importance of his function in the overall program and design his training to include not only the science but the art of practice. It is important that the general practitioner be liberally trained in medicine, pediatrics, obstetrics and minor surgery; that he be trained to recognize his limitations; that he have ready available means of referring cases beyond his training; and that he have access to continuation courses to keep abreast of the new developments in medicine.

The physician should have adequate training in psychology and sociology that his management of medical problems should not fall short of comprehensive advice to the patient in all the things which disturb his welfare. He should be skilled in teamwork in order to work effectively both with his colleagues and with public and private agencies concerned with the patient's welfare.

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Psychoneurosis Based on Organic Ailment Cured by Electric Shock Therapy

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ALTHOUGH the efficacy of electric shock treatment for psychoneurosis is still in dispute, most psychiatrists now recognize extreme hypochondriasis as a frequent manifestation of an agitated depression which responds well to electric shock therapy. A more recent aspect of this form of therapy is in application of it for symptomatic relief in depressions apparently arising from organic disability.

The author's experience indicates that electric shock treatments are effective not only in overcoming depression and other emotional reaction to a physical illness, but sometimes also appear to alleviate apparently real physical symptoms. Moreover, in some cases psychoneurosis which has interfered with physical treatment has been overcome.

Because electric shock treatment is seldom tried where there is organic disability to account for a patient's symptoms, four case histories in which satisfactory results were obtained in these conditions have been selected for review.

Case No. 1: A 55-year-old cachectic man entered the hospital with a complaint of inability to swallow and fear of cancer. He had had three previous complete negative gastro-intestinal x-ray series, one of which was at a university hospital.

A diagnosis of psychoneurosis was made hy all doctors who had studied him previously, despite the fact that the patient had been a successful real estate and insurance broker without neurotic tendencies up until two years previously.

The family history is interesting in that two sisters died of the same complaints. One refused to eat and starved to death. The patient's wife was not certain of the circumstances of the death of the other sister, although she said they were somewhat similar. The wife stated all the members of the patient's family were nervous.

Physical examination showed the usual signs of malnutrition without other gross evidence of physical abnormality. A written report from the referring doctor and copies of the last gastro-intestinal series were received.

Blood count, urinalysis, and Wassermann at the time of entrance into the hospital all were within normal limits except for moderate anemia.

The patient refused to eat, stating that he could not swallow and that he vomited everything he tried to take orally. He was given moderate sedation and was tuhe fed without difficulty, and although he attempted to regurgitate the formula, it was retained satisfactorily. When his stomach was filled with one quart of formula feeding, he complained of indescribable pains in his abdomen, hut when allowed to eat and regurgitate his food as he had heen doing before his entry, there were no complaints of abdominal pain.

The patient was begun on electric shock treatments three times a week. After the fourth treatment, he was eating and free of complaints. He gained 12 pounds in weight in the first week. Treatments were continued until the patient had had eight treatments. He then stated he felt completely well and wished to return home, feeling that he could return to work within a week or two.

That night, the patient vomited a large quantity of undigested blood. Esophagoscopy revealed a large fungating mass about half way down the esophagus. A diagnosis of inoperable carcinoma was made, treatments were discontinued, and the patient was discharged to his home in a cheerful frame of mind. He felt he was on the road to recovery.

The following week he did not remember the hemoptysis nor the esophagoscopy. He remained in a cheerful frame of mind, free of complaints, and continued to eat well until the time of his death from uncontrollable hemorrhage three months after his discharge from the hospital.

This case illustrated a reactive depression with psychoneurotic symptoms associated with cancer of the esophagus. The depression and psychoneurotic symptoms were cured by electric shock treatment, making the remaining few months of the patient's life happy ones.

Case No. 2: A 53-year-old, slightly obese, extremely depressed white female presented depression of an agitated variety.

The patient had extreme hypochondriacal complaints of all kinds. She had very definite hypertrophic arthritis which was active. Both knees were swollen, and there was permanent deformity of the joints as well as active inflammatory processes. The blood count, urinalysis and Wassermann were normal and the sedimentation rate was 31 mm. in one hour.

She walked with two crutches and complained of inability to get around at all. When allowed to do so, she stayed in bed and complained of pains everywhere from her head to her toes. Arthritis had been present for eight years previous to entry into the sanitarium, and for this treatment had been carried out by an orthopedist. The depression had become so severe, however, that the orthopedist no longer could treat her.

Eight electric shock treatments produced complete remission. She was cheerful and the arthritis was apparently so much improved that she could get around with one cane, though the deformity of the knee joints was such that it was not possihle to straighten either joint beyond 170 degrees.

The question of course arises as to whether the depression was a coincidental, concomitant illness, or was caused primarily by the eight years of illness. In either case, experience with this patient seems to indicate that electric shock treatments will overcome the apparently real physical symptoms as well as the emotional reaction to an illness and that they can be of benefit when a depression exists, even though there is a severe physical ailment which appears to be the cause of the depression.

Case No. 3: A 54-year-old, slender, depressed white female spent three months in a sanitarium under expectant care because she suffered from severe hypertension (systolic pressure 260 mm. mercury) and had had one kidney removed because of a cystic condition. About the time the

Presented before the Section on Neuropsychiatry at the 75th Annual Session of the California Medical Association, Los Angeles, May 7-10, 1946.

kidney was removed, hemorrhoidectomy also was performed. After the kidney operation, she was sure a sponge had been left inside.

Interview indicated that she had always been a woman of limited inner resources. She had lived in a small community, had one daughter and had been happy caring for her and keeping her house. She had always been of a fearful and worrying type. Her child recently had left home, married and had a child of her own. The patient had moved to a large city and had not made new friends readily.

In this case the patient, a woman with hypertension, suffered from typical agitated depression which seemed to be partially reactive in nature. Physical findings were negative. Laboratory findings were not contributory. The patient was given 15 electric shock treatments and had a complete remission. The treatments not only relieved her symptoms but a marked lowering of blood pressure ensued. Her blood pressure dropped to 150 mm. systolic, and 100 mm. diastolic.

She was discharged, but within about three weeks began to slip back and have more physical complaints. She complained of headaches, of pain in her eyes, of "pains around the ovaries"—a different complaint at every visit. She was treated expectantly for three or four months but gradually relapsed, although at no time did she become as ill as she was prior to treatment.

Electric shock treatments were recommended on an outpatient basis, and after six treatments complete remission again resulted. Four more treatments were given at weekly intervals and at an examination about six months after the last shock treatment, the patient was still symptom free. The blood pressure continued around 150/100 mm. but no longer did pain in the head and body concern her. She was contented, was doing her own house work and seemed completely well.

Though this third case may appear simply to be an involutional melancholia with hypertension, the history of the case strongly suggests prolonged worry over the throbbing in her head caused by her hypertension and the increase in this symptom to the point that it became an unendurable pain.

Case No. 4: This patient, a 34-year-old, tall, healthy appearing young man, suffered from cyclical depressions at two to four-year intervals. His first severe depression occurred eight years previously. At that time he was living in New York and there he underwent psychoanalysis for two years. The depression at that time subsided in about four months. At the end of the two-year analysis, he suffered his second severe depression which lasted between four and six months. Two years later (May, 1942) he was working in San Francisco for an advertising company and again became depressed. After about five months, he was extremely depressed and suicidal. He took three electric shock treatments at Stanford Hospital and had a complete remission which lasted until the onset of another depression early in 1945.

About two years after his last previous depression (April, 1944) the patient underwent thyroidectomy. The thyroid removed was found to be malignant. Several metastatic cervical nodes were removed at the same time. About six months later, he again had adenopathy in the cervical region, and received x-ray therapy to the extent that he felt definitely weakened for about six months. He had repeated check-ups every three months and to date (January, 1948) there has been no noticeable increase in any of the cervical nodes or any other apparent metastatic process.

The patient was not supposed to know that there was any relationship between the difficulty with the nodes in his neck and his previous malignancy. But his wife knew, and since she was extremely emotional and apprehensive, it seemed likely that there was a definite relationship between the most recent depression and knowledge or suspicion of his serious physical condition. In this latest depression three electric shock treatments were administered, and the patient again had a complete remission and returned to his slightly hypomanic, very active personality.

These four cases were selected for presentation here because although they are quite different in nature, they all showed depression or neurotic symptoms which apparently occurred largely as a result of organic desease. In dealing with these and other similar cases, I have found that, although the patients had not been given shock therapy in other sanitaria because an organic ailment was discovered, they benefited from the course of shock treatments, even though the organic disability continued.

CONCLUSIONS

1. Depression and psychoneurotic symptoms may be remitted by electric shock treatments.
2. Existence of organic disabilities to account for symptoms are not contra-indicative to electric shock therapy for emotional reaction to physical illness.
3. Where psychoneurosis arising out of organic illness becomes a barrier to physical treatment, electric shock treatment may be effective in returning a patient to a receptive attitude toward physical treatment.

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Perinephric Abscess Secondary to Renal Infection

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A PERINEPHRIC abscess has been defined as a "Suppurative inflammatory lesion of the perinephrium, that is the fatty bed surrounding the kidney in the lumbar gutter."[5] This definition places all perinephric abscesses in one group without regard to their etiology or behavior. Surgically speaking, however, two types which are fairly well defined can be recognized as shown by the history, the clinical course and the operative findings. These two are in general quite distinct and for the want of better terms may be classified under primary abscesses and secondary abscesses.

The primary or classical perinephric abscess is the one most commonly encountered, having an acute history and a clinical course which makes its diagnosis usually inevitable provided the examiner keeps it in mind. In contrast, the secondary perinephric abscess is preceded by a chronic infected kidney and has its signs and symptoms often overshadowed or masked by the original renal disease. The line of demarcation between primary and secondary perinephric abscess is not always clearly defined but in general this classification will cover the majority of cases, surgically speaking.

The primary abscess originates from a distant focus, such as a furuncle or infected wound. The infecting organism is blood borne from the original focus to the fatty capsule of the kidney. A distinct period of time elapses between the original infection and the appearance of the perinephric symptoms. The onset is fairly sudden, signs appearing in the region of a previously normal kidney, without as a rule history of a past infection. The course is acute and resembles that of an abscess in any other part of the body, with chills, fever, moderate leukocytosis and local tenderness. Cystoscopic findings are generally negative and significant findings in the urine are limited to a few pus cells and a positive culture of some type of coccus. Pyelograms are negative although the kidney may be fixed and the psoas shadow obliterated. The diagnosis of primary perinephric abscess should be made in a reasonable time after careful study.

The secondary perinephric abscess in contrast to the primary abscess is chronic and follows an infective process in the kidney itself. Its onset is insidious and often unsuspected because of active symptoms due to the original kidney lesion. The history is indefinite as far as the abscess is concerned, but the presence of long standing renal disease is almost invariably noted in the history. Often the patient has had previous urological treatment, the nature of the kidney lesion being known. The abscess proceeds slowly, often for months, and is frequently undiagnosed until surgical exploration. At operation the abscess is found associated with and secondary to the chronic infected kidney lesion whose symptoms have overshadowed those of the abscess.

The classification primary abscess, and secondary abscess, is open to debate. Some authors deny that an abscess can develop in the renal fat unassociated with previous infection in the renal cortex. Beer[1] in 1936, called attention to multiple small coccal abscesses in the cortex of the kidney found at operation for perinephric abscess. Granted that small cortical abscesses may be found under the renal capsule, Beer's conclusions are unconvincing as to which came first, the large perinephric abscess, or the small cortical abscesses which were only discovered when the capsule was stripped. Young[7] recognized primary perinephric abscesses by saying, "In these cases one deals with a hemotagenous infection arising here [perinephric fat] just as it does in an abscess or cellulitis elsewhere in the body."

Regardless of what paths the infecting organism travels from its original focus to the perinephric fat, surgically one of two distinct situations will be encountered: (1) a fairly acute primary abscess which lies in the fatty tissue apparently independent of the kidney proper and which usually heals promptly with simple drainage, or (2) secondary abscess, chronic in character which originates unquestionably from an infected kidney involving the kidney and surrounding tissue in a chronically infected mass and which at operation usually requires nephrectomy as well as drainage.

The following two cases emphasize some of the points brought out in this paper concerning secondary perinephric abscess. Both cases have histories of renal disease for years, both cases had unsuspected perinephric abscesses that had been present for months until large palpable masses could be felt in the upper abdomen. In both cases the symptoms of the active kidney lesion masked those of the abscess delaying the diagnosis of the latter several months.

CASE REPORT

Case 1. A woman, aged 36 years, was first seen September 9, 1944, because of pain in the left abdomen and a swelling in the left axillary line over the 8th, 9th and 10th ribs.

Past History: Following an attack of scarlet fever at the age of seven, the patient developed "kidney trouble" which was associated with chills, fever, pains in the left abdomen and later the passage of thick, purulent urine followed by recovery. Similar attacks lasting about four weeks, occurred over several years at intervals, terminating always with the passage of a large amount of purulent urine. There was always pain in the left abdomen during the attacks and the general term of "kidney trouble" given as the diagnosis.

Present History: In April, 1944, the patient developed another typical attack with the chills, fever and pain in the left abdomen and back. However, instead of terminating as usual after four or five weeks, fever continued up to

the time the patient was seen the following September. A week before reporting she noticed a tender and slowly progressing swelling on the left side of the chest in the axillary line. At times the pain in that area was quite acute. There was constant pain in the left side of the abdomen and back, at times radiating to the groin. The patient lost 22 pounds in five months, and weighed 96 pounds at the time of admission.

Examination: The patient was a thin anemic woman with a temperature of 103°F. The swelling in the left axillary line was about 10 cm. in diameter, deep seated, slightly fluctuant and tender. There was a mass in the left flank which was fixed and tender. The urine showed a few pus cells and bacteria. Vaginal examination was negative. The lungs were clear and a plain x-ray film showed nothing abnormal above the diaphragm although the dome of the diaphragm on the left seemed somewhat elevated.

Under local anesthesia an incision was made over the swelling in the axillary line, parallel to the ribs, and about 30 cc. of odorless purulent fluid was evacuated. October 6 the patient was cystoscoped. The catheter on the left met an impassable obstruction in the lower third of the ureter and the kidney on that side was functionless. Urograms on the right side were all normal. On the left, however, an elongated stricture in the lower third of the ureter was noted obstructing the catheter. The ureter above that point was greatly dilated and a hydronephric pelvis was seen. The iodide solution was seen to extravasate into the perirenal tissue at the upper pole of the kidney and to pass up under the ribs to the site of the swelling in the left axillary line. The irregular abscess thus demonstrated was noted to communicate directly with the infected kidney and with the swelling noticed by the patient on the left chest wall (Figure 1). An interesting sidelight in this case was the blood count and the post operative course. (See Table 1.) The leukocyte count at the onset was 32,300, of which 82 per cent were neutrophiles, the count subsequently dropped to 21,000 immediately after the operation, but thereafter it steadily increased to 124,250 with 98 per cent neutrophiles shortly before death. A hard mass developed in the epigastrium which suggested an accumulation of pus when taken into consideration with the white count, but when exposed under local anesthesia it proved to be a solid tumor. At autopsy extensive metastic carcinoma was found involving the liver and other organs. Re-examination of the kidney removed at operation showed in addition to the pyonephrosis an infiltrated area which proved to be adeno carcinoma. The unusual blood picture was an example of "leukemoid reaction." [2, 3, 4, 6] Such blood changes have been reported accompanying carcinoma of various organs, including the liver, but none as far as we have found have



Figure 1, Case 1.—Retrograde urogram showing stricture of left ureter opposite 4th lumbar vertebra, hydroureter and hydronephrosis with abscess extending from upper pole of left kidney through chest wall.

TABLE 1, CASE 1.—*Blood Studies Showing Leukemoid Reaction.*

Date	Hg.	R.B.C.	W.B.C.	N.
10-20	10.5 62	4,000,000	32,300	82
11-9	9.5 55	4,290,000	21,000	89
11-13	93.55	3,340,000	23,000	90
11-24	12.1 75	4,710,000	40,700	
12-6			81,400	96
12-11	9.4 55	3,720,000	62,100	92
12-19	10.5 62	3,520,000	72,800	96
12-25	2.7 52	3,230,000	110,000	97
12-28	8 47	2,190,000	124,250	98½

Hg.—Hemoglobin in Gm. and per cent of normal.
RBC.—Erythrocytes.
WBC.—Leukocytes.
N.—Neutrophiles.

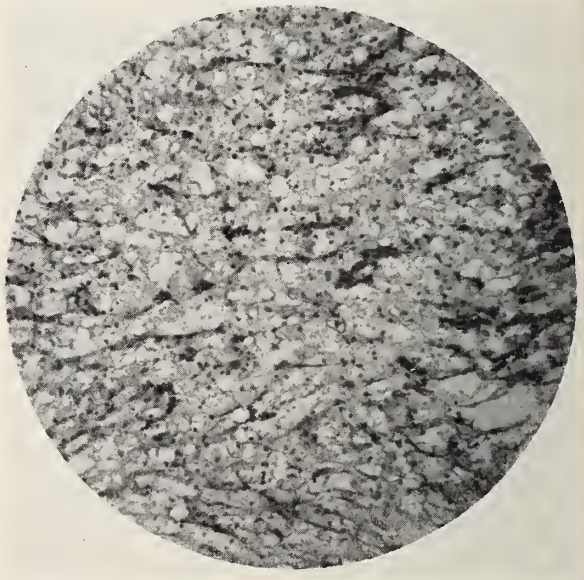


Figure 2, Case 1.—Section of kidney tumor showing large pale staining cells.

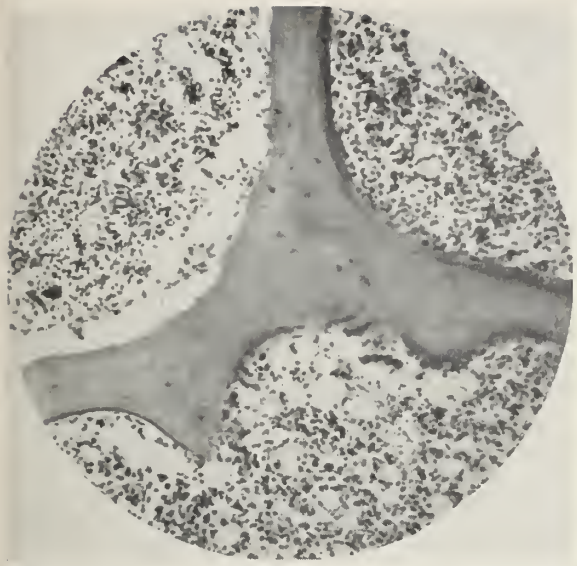


Figure 3, Case 1.—Bone marrow showing marked myeloid hyperplasia and no metastasis.

been reported with the primary carcinoma in the kidney. (Figure 2 and Figure 3.)

Case 2. *History:* A man, aged 62 years, reported that in 1929 pus was discovered in the urine during an insurance examination. Turbid urine had been noted for at least a year before this time. Pus continued to be present in the urine for about 14 years when it suddenly disappeared. Three years prior to examination a tumor was discovered in the left side of the abdomen, but operation was refused. In May 1944 a biopsy was taken from the tumor through an incision in the left flank. The report showed no malignancy. Subsequently the incision discharged thin purulent fluid necessitating constant dressings.

Examination: A very large fixed, tender mass was palpated filling the whole left abdomen from the thorax to below the crest of the ilium and extending over the midline. Cystoscopic study revealed a normal right kidney, and a functionless left kidney with the left ureter obliterated at a point about 5 cm. above the outlet. A plain x-ray film showed a large calculus in the region of the left kidney. (Figure 4.)

At operation in January 1945 the tissues were found matted together with no line of cleavage evident. As the kidney was approached a large perinephric abscess was opened adjacent to the lower pole. A lobulated distended kidney was freed with difficulty and when opened discharged thick, purulent fluid. The kidney fossa was surrounded by a mass of indurated tissue which made up the bulk of the palpated tumor. This mass extended downward into the pelvis and over the midline pushing the peritoneum and abdominal contents to the right. The infiltrated tissue was explored and no more free fluid found. Multiple drains were inserted after nephrectomy. Recovery has been slow but progressive.

CONCLUSIONS

Surgically, perinephric abscess may be classified under two heads, the *primary abscess* which arises



Figure 4, Case 2.—Showing multiple calculi in left kidney area with mass occupying whole of left abdomen.

from a distant focus and runs an acute course with no pre-existing renal disease. and the secondary abscess which is intimately associated with an already existing renal infection. The latter type often appears insidiously under cover of the original symptoms of renal disease which makes diagnosis of it difficult.

A careful study of the case history will usually assist in an earlier diagnosis in spite of the simultaneous existence of long standing renal symptoms.

Two cases of secondary perinephric abscess are presented which emphasize the points brought out in this paper.

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REFERENCES

1. Beer: Coccic infections of renal cortex, J.A.M.A., 106: 1063 (March 28), 1936.

2. Hill, J. M., and Duncan, C. N.: Leukemoid reactions, Am. J. M. Sc., 201:847 (June), 1941.

3. Krumbharr, E. B.: Leukemoid blood pictures in various clinical conditions, Tr. A. Am. Physicians, 41:343, 1926.

4. Meyer, L. M., and Rotter, S. D.: Leukemoid reaction in malignancy, Am. J. Clin. Path., 12:218 (April), 1942.

5. Simeone, F. A.: Perinephric abscesses, Archives of Surgery, 45:424 (Sept.), 1942.

6. Thompson, W. P.: Abnormalities in the white blood cell response, Am. J. M. Sc., 182:334 (Sept.), 1931.

7. Young: Young's practice of urology, Vol. 1, p. 132.

Benign and Malignant Prepyloric Lesions of the Stomach

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THE difficulties in diagnosis between benign and malignant ulcerations of the stomach have been appreciated for many years. Recently cases of chronic gastritis simulating carcinoma have been reported. From the standpoint of the general surgeon, ulcerative lesions of the stomach have been considered as being potentially malignant, and subtotal gastric resection has been the treatment of choice. Since the curability of gastric carcinoma has been disappointingly low, it has been suggested that total gastrectomy replace subtotal gastrectomy in the treatment of this type of lesion.[5] During the past four years considerable attention has been focused on the work of Dragstedt and others in the treatment of peptic ulcer by sectioning the vagus nerves either above or below the diaphragm.

During the early stages of this work, only those patients who showed marked excess of free hydrochloric acid, and an excessive amount of nocturnal secretion, were chosen for this procedure. Gradually vagotomy has come to replace subtotal gastric resection in the surgical treatment of peptic ulcer. In June 1946, Dragstedt[2] recommended that this procedure supplant subtotal resection in duodenal, gastrojejunal, and "proven" gastric ulcers. Elsewhere in the literature appear reports of patients with gastric ulcer treated by section of the vagus nerves.[3] In December 1946, Dragstedt spoke in Los Angeles and made the statement that subtotal gastric resection in the treatment of peptic ulcer was to him of historical significance only. This concept is not completely in accord with that of many other surgeons. Vagotomy, combined with gastrojejunostomy when indicated, gives dramatic and may give permanent relief to patients suffering from duodenal, gastrojejunal, and selected gastric ulcers.

The problem of differentiating between benign and malignant lesions of the stomach is complex. Allen[1] in reviewing a series of cases found that 14 per cent of the patients treated as having benign gastric ulcer proved later to have carcinoma of the stomach. He observed that all of these patients responded well to conservative therapy, that the ulceration diminished in size, and that the surrounding area of gastritis disappeared. Palmer[6] proved quite definitely the same fact, that malignant ulcers may heal and become covered by neoplastic mucosa, or by a layer of epithelium which is normal in appearance. As to the differential diagnosis Allen stated that helpful information was derived from an analysis of the location of the lesion, age of the patient, and the duration of symptoms. Gastric analysis, particularly as regards free acidity, and the size of the ulceration were not impressive. The type and radiation of pain, and the rate of healing under conservative therapy were valueless. Ten per cent of the lesions on the lesser curvature and of the pylorus itself, and practically all ulcerations in the immediate two centimeters of stomach proximal to the pylorus proved to be malignant. An interesting fact obtained from Allen's series was that resections done on lesions thought clinically to be benign, and proven by the pathologist to be malignant, lead to an increase in five-year cures from 20 to 40 per cent over clinically malignant lesions.

Pre-operative examination of gastric lesions, including radiographic and gastroscopic studies, gastric analysis, and a careful history often fail to establish the diagnosis. In August 1946, Rennie[7] reported several cases of antral gastritis and carcinoma. In one patient, at the primary operation, a rubbery induration and thickening of the antrum was found. Gastrotomy was performed and a clinical diagnosis of gastritis was made. The gastrotomy was closed, and nothing further was done. Several months later the patient returned with considerable gastric distress and pylorospasm. Laparotomy was again performed and the lesion appeared somewhat the same as before. Gastrotomy was done and it was found that the pylorus was narrowed and almost occluded by a ring of firm tissue. Biopsy of the pyloric ring was taken in two places and was reported as chronic inflammatory tissue. Posterior gastroenterostomy was performed and the gastrotomy closed. Report of paraffin sections showed an infiltrating adenocarcinoma of the pylorus.

The differential diagnosis between prepyloric ulcer, gastritis, and carcinoma cannot definitely be established with our present armamentarium. No single diagnostic procedure, nor the sum of all available, can definitely exclude the diagnosis of carcinoma. In view of the excellent results obtained in duodenal, and in some cases of gastric ulcer, by vagotomy, the surgeon is tempted to do this procedure, plus gastrojejunostomy if pyloric obstruction is present, in lesions of the stomach which are apparently benign. Delay in operation or conservative procedures may be beneficial to patients with benign lesions, but may likewise lead to tragic results if the lesion later proves to be malignant.

CASE REPORT

An Italian housewife, aged 51 years, was first seen on November 21, 1946. She was in good health until about two years previously, when following receipt of a letter from the War Department reporting that her son was missing in a flight over Germany, she began to have intermittent epigastric pain with some nausea and vomiting. This continued at intervals, first once a week and eventually daily. She saw several physicians who attributed her present illness to the fact that she was worrying about her son having been lost in action. One year later a cholecystogram was reported as negative. Epigastric pain continued and was usually relieved by warm milk. During the preceding few months vomiting occurred frequently, and for two weeks nausea was constant. Food or fluids could not be retained.

No history of hematemesis, tarry or clay colored stools, or icterus could be obtained and there had been no weight loss.

Physical examination revealed nothing significant. The value for hemoglobin was 13.8 gm.; leukocytes numbered 6,900. Gastric analysis with alcohol meal revealed no free hydrochloric acid on any of the specimens. There was a trace of occult blood in all specimens.

Radiological examination on December 2nd was reported as follows: "Two gastro-intestinal examinations were made of the stomach, one before and one after heavy sedation. Both of these studies showed a stiff, tubular antrum. The lesion seemed to extend from the pylorus proximally about an inch and a half. It suggests carcinoma of the annular or scirrhous type with marked stiffening and narrowing of the pyloric outlet. The patient carried a large gastric residue at five hours. Gall bladder dye study revealed normal function and no stones. Scout radiographs of the abdomen and gall bladder reveal nothing remarkable."

The patient was admitted to the Hospital of the Good Samaritan on December 14. Her stomach was aspirated and contained 1300 cc. of greenish liquid with no gross evidence of blood. She was placed on continuous gastric suction and fluid and electrolytes were replaced. On December 16 the abdomen was opened through a right paramedian incision. The stomach was small and there was a firm mass palpable on the gastric side of the pylorus which seemed to comprise the anterosuperior wall of the stomach. There was no definite crater palpable. The lesion was smooth and the serosa was not involved. The duodenum was smooth, and no ulcers were palpable or visible. There were numerous soft lymph nodes throughout the gastrocolic and gastrohepatic omentums. The gall bladder was thin walled and compressible. The foramen of Winslow was patent. The remainder of the viscera were normal, including the liver which was small and contained no metastatic nodes. A frozen section of one of the lymph nodes of the mesentery was reported as benign. However, since the lesion was entirely on the gastric side of the pylorus, it was not felt safe to do a vagotomy as malignancy could not be excluded. A posterior Polya-Hofmeister subtotal gastric resection was done.

Examination of the resected stomach showed what appeared to be a shallow prepyloric ulcer, located on the lesser curvature toward the anterior wall with marked thickening and deformity of the adjacent pyloric ring which formed one portion of the ulcer. The distal one-third to one-half of the resected stomach, particularly along the lesser curvature, showed marked roughening and focal thickening of the mucosa. In some areas there was apparent atrophy. Impression at this time was that of a chronic prepyloric ulcer of the stomach and chronic gastritis.

Pathological Report: "Diagnosis (1) Chronic peptic prepyloric ulcer of the stomach; (2) Chronic gastritis; (3) Adenocarcinoma of stomach; (4) Adenocarcinoma, metastatic, regional lymph nodes. Comment: The malignancy appears to be arising in an area of pre-existing gastritis or perhaps healing gastric ulcer. There is no evidence in the sections of malignancy beyond the mucosa."

Postoperatively the patient developed partial retention, due apparently to edema at the stoma which responded to conservative therapy, and at the end of a week postoperatively she was tolerating food and fluids with no difficulty. Her wound healed by primary intention and she was discharged from the hospital on December 28.

COMMENT

In summary of this case the following facts stand out:

1. Symptoms of indigestion of over two years' duration were very suggestive of peptic ulcer as the onset came following a psychic upset and there was relief of pain with food.

2. Gastric analysis showed an absence of free hydrochloric acid which is not uncommonly seen in individuals over 50 years of age, and in patients with peptic ulcer with either pyloric stenosis or gastritis.

3. X-ray evidence was that of carcinoma, but similar findings occur in cases of gastritis.

4. Biopsy of a regional lymph node showed inflammatory reaction only.

5. Operative findings including biopsy of a regional lymph node did not definitely establish the diagnosis.

In view of the present feeling toward surgical treatment of peptic ulcer, during surgery the question arose as to whether gastrotomy with biopsy and frozen section should be used to establish the diagnosis. It is probable that sections taken through the ulcer would have failed to establish the diagnosis of malignancy, and in view of the case reported by Rennie[7] the futility of this procedure is evident.

It is factual that some surgeons are contemplating vagotomy in lieu of subtotal gastrectomy in cases of gastric ulcer. Jones[4] stated that while he was operating on a case of gastric ulcer before a large group of surgeons, 80 per cent of them stated they thought that vagotomy alone should be done. The resected stomach from his case also proved to be malignant.

SUMMARY

The difficulty in diagnosis between benign and malignant lesions of the stomach has been discussed. The most frequent source of error is undoubtedly in lesions in the prepyloric area. Frequently an accurate diagnosis can be made only from paraffin blocks of the resected specimen. As pointed out radical surgery for carcinoma of the stomach is becoming more popular.

In view of these facts, vagus section or any other palliative procedure for prepyloric gastric lesions should be condemned. Although it may effect a cure in some cases of benign ulceration of the stomach, it may also lead to tragic consequences.

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REFERENCES

1. Allen, Arthur: Gastric ulcer and cancer, Surgery, 17:750 (May), 1945.

2. Dragstedt, Lester R.: Section of the vagus nerves to the stomach in the treatment of gastroduodenal ulcer, Minnesota Med., 29:597 (June), 1946.

3. Grimson, K. S., Taylor, et al: Transthoracic vagotomy in peptic ulcer, So. Med. Jo., 39:460 (June), 1946.

4. Jones, Thomas: Discussion of case report, Hospital of Good Samaritan Staff Meeting (January), 1947.

5. Longmire, William P., Jr.: Total gastrectomy for carcinoma of the stomach, Surg., Gynec. & Obst., 84:21-30 (January), 1947.

6. Palmer, W. L., and Humphreys, E. M.: Gastric carcinoma; observations on peptic ulceration and healing, Gastro-enterology, 3:257-272 (October), 1944.

7. Rennie, James W. R.: Antral gastritis and spasm: Their clinical and surgical significance, Annals of Surgery, 124:402-409 (August), 1946.

Otological Diagnostic Clinics of California

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IN 1943 the California State Legislature passed assembly bill No. 257 which provided authority and funds for the establishment of a Hearing Conservation Program in the Bureau of Maternal and Child Health of the State Department of Public Health. A head of this program was to be appointed whose title is Hearing Conservation Specialist. The person now serving in this capacity is Donald R. Caziarc.

Under auspices of the Bureau of Maternal and Child Health otologic diagnostic clinics are to be established in various communities in the state. These clinics are to be purely diagnostic. The physicians in charge are specially qualified and approved otologists. All children found by them to be in need of medical or surgical care are likewise referred to properly qualified and approved physicians. The case finding is done in schools by school nurses or audiometrists who are specially trained and who are approved for this work.

The success of an otological diagnostic clinic depends upon the preparatory work done by audiometrists, school nurses, and their assistants. If it were not for their methodical testing and screening, few cases of hearing defects among school children would be brought to medical attention at an early date. The otologist will naturally appreciate this valuable contribution, but he can do more; he can give encouragement and aid to these co-workers by praising their services so that they will be duly appreciated by parents and lay assistants. Thus, an enthusiastic spirit of cooperation can be developed, which will act as an incentive to all who participate in this work.

The standard by which children are referred to an otological diagnostic clinic has been established by an advisory committee in which the California Medical Association, Section of Otolaryngology, is represented by several members. Examination by an otologist is recommended whenever preliminary screening tests resulted in one of the following findings:

1. A loss of 20 decibels in one or both ears, in any two frequencies between 128 and 8192 cycles.
2. A loss of 30 decibels or more in any one frequency.
3. A mild hearing deficiency, with concomitant signs of a pathological condition which might result in progressively more severe loss of auditory function ("common sense referral").

These referral criteria have been developed from the experience of otological practice; and suggestions for changes or improvements of these present standards are invited.

No other single factor contributes so much to the success of an otological diagnostic clinic as the presence of one or preferably both parents while the child is being examined. Advising the parents to this effect is part of the valuable spade work performed by the school nurse and her assistants. The child's history can then be taken by a nurse or lay assistant, who inserts the parent's answers to her questions in the history sheet. It is easy for the otologist subsequently to complete the otolaryngological history according to his findings.

DISCUSSIONS WITH PARENTS

Thereafter, the parents watch the re-check test by means of a pure-tone audiometer, and the otological examination performed by the doctor. If the parents are present while the child goes through the different steps of audiometric and otologic procedures, they will be impressed by the purposeful and efficient routine which they are witnessing. In this manner, the greatest danger to the success of any hearing conservation program can be largely avoided, namely the failure of the parents to follow up the examination and diagnosis by providing prompt care for the child's hearing defect. It is most important that the doctor should immediately discuss with the parents the audiometric findings, and different psychological and sociological aspects of deafness, as well as the medical and surgical care required by the child. If such a course is followed, the parents rarely fail to comply with the otologist's recommendations.

In the words of an outstanding nurse, in charge of one of the most successful hearing clinics in California, it is necessary to stress "the quality of the examination and the explanations to the parents rather than the number of children examined."

The examining otologist should also watch for signs of speech defects in the patient. At times, speech correction, special seating in the class room, lip reading, the use of a hearing aid, or auricular training may be indicated.

A few simple hints will perhaps aid in the efficient performance of the various routine examinations: Several lay assistants should be on hand to help the nurse and the audiometrist. Much of the doctor's time can be lost in waiting for the patient to be prepared for him, or in the ushering in and out of child and parents. During the course of the examination, the physician dictates brief notes to a lay assistant who, after a few cases, is usually able to write the findings and recommendations out in long hand. Whenever possible, these lay assistants should be prominent persons in the community, as for instance officers of the P. T.-A. They will appreciate the skill and thoroughness of the examinations, and soon

become staunch supporters of the Hearing Conservation Program. Once an otological diagnostic clinic has been properly started and conducted, the interest of the lay assistants and of the school personnel will not permit it to die.

Whenever an otologist, approved by the committee representing the California Medical Association, Section of Otolaryngology, is available in the community, he should be called upon to perform the specialized examinations; if one or more such otologists practice in the community, a rotating schedule for service in the clinic should be arranged. At the start of a new otological diagnostic clinic the assistance of an otologist with previous experience in conducting such clinics will prove helpful.

As the otologist is compensated for his time through special state appropriations, his work at the otological diagnostic clinic does not constitute a charity. Furthermore, fully 80 per cent of the examined children will require special medical or surgical care. And such services are not provided by the clinic and will, therefore, have to be administered by a local otologist, approved by the above mentioned committee, in his private practice. In many instances the parents insist that the examining doctor should thereafter treat the child privately. While in the great majority of cases the child will receive further treatment as a private patient, the Crippled Children's Service will arrange for needed care whenever the family is unable to pay. The entire Hearing Conservation Program, therefore, is on a sound professional and financial basis and offers an integrated plan of medical services for all acoustically handicapped children. By wholehearted cooperation with this state-wide program, the private physicians of California are making a positive contribution to the standard of health in their respective communities and are strengthening anew the argument against "socialized medicine."

Only minimal equipment is required, in order to conduct an otological diagnostic clinic, and oftentimes the instruments which the otologist usually carries in his out-call bag will adequately meet the needs. The following list has been compiled in order to convey an idea of the equipment and instruments necessary for an itinerant clinic.

1. A table on which to place instruments. Part of this table may be used by the lay assistant when taking notes.
2. Four chairs—one each for patient, parent, doctor, and assistant.
3. Light source—such as drop light or goose-neck desk lamp.
4. Washing facilities for hands and instruments.
5. Head mirror.
6. One pint of 70 per cent alcohol.
7. A container filled with 70 per cent alcohol in which used instruments can be rendered relatively sterile.
8. Paper towels.
9. A small pack of sterile cotton.
10. Finger cots for digital examination of nasal pharynx.
11. Wooden tongue blades.
12. 4 x 4 sterile gauze sponges.
13. One per cent ephedrine sulphate in normal saline—one ounce; to be used for shrinkage packs.
14. Ear specula—approximately one dozen of various sizes.
15. Metal applicators—one-half dozen.
16. Nasal specula—one-half dozen.
17. Postnasal and laryngeal mirrors — approximately one dozen of various sizes.
18. Cerumen curettes — approximately one-half dozen of various sizes.
19. Bayonet forceps — approximately one-half dozen of various sizes.
20. Cerumen syringe.
21. Emesis basin.
22. A pure-tone audiometer.

More equipment and other ear, nose and throat instruments may be desirable, especially if the clinic is to be more or less permanently conducted at the same location. Special chairs, stools, cabinets, lights, sterilizers, as well as positive and negative pressure would considerably help to increase efficiency. But it must be remembered that a hearing clinic of this type is only intended to serve diagnostic purposes, while all treatment is conducted privately by the otologist at his office or at a hospital.

Forms for the patient's history as well as audiometric and physical findings (HC 1-4) will be furnished by the Hearing Conservation Section, Bureau of Maternal and Child Health of the California Department of Public Health, in San Francisco. The records will be completed by the nurse and lay assistants. One copy will be filed with the child's health record at his school, while the others will eventually reach the treating physician, the local health department, and the Hearing Conservation Specialist to be used for follow-up and statistical purposes. These records will also furnish the basis for securing adequate appropriations from the legislature in order to sustain and expand the Hearing Conservation Program.

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MEDICAL PROGRESS:

Ophthalmological Progress: Sight Restoration by Corneal Transplant

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OF the 250,000 blind persons in the United States today, 22,000 of these have impaired vision due to corneal scarring. Although half of these patients are unsuitable for graft because of the varied causes of this condition, the recent medical and surgical progress which has been made in the field of keratoplasty indicates that many who believed their conditions to be hopeless can successfully avail themselves of operation.

Surveys of the early literature demonstrate that surgeons were concerned with the problems presented by eye tissue therapy as early as 1789. It was in this year that Pellier made the first unsuccessful attempt at the replacement of diseased tissue by a cornea made of glass and supported by a gold band. The real forerunners of today's modern operation, however, were not reported until the years 1823 and 1824 when Meissner conceived the idea of grafting a transparent animal cornea, and Reisinger gave the name "keratoplasty" to an operation in which he experimented with the substitution of a leukoma by a transparent cornea in the rabbit. The first ideas concerning the contemporary theory of the biologic processes occurring in keratoplasty were expressed in 1843 by Pluvier who, after several years of observation, reported his belief that favorable results of corneal grafting were due to the growth of corneal elements in the host. In his opinion, corneas taken from cadavers supplied the best material for transplantation.

During the early half of the Nineteenth Century, all work in keratoplasty which was attempted on human beings consisted mainly in experimentation with single cases of transplantation, none of which succeeded. The operation was indeed a formidable undertaking due to the limitations of instruments and methods of anesthesia. Despite the lack of favorable clinical results and the pessimism of many physicians, attempts at keratoplasty were continued, and several advances in technique were developed, due mainly to the influence of a German investigator, Von Hippel. This physician, who conducted his experiments from 1870 to 1880, emphasized the importance of partial transplantation of the cornea, and developed a technique in which the trephine, which could measure the exact size and shape of the transplant, became widely used.

It was not until 1907 that an Austrian, Zirm, gained international fame through his report of the first successful case of keratoplasty. Using Von Hippel's trephine, this surgeon succeeded in removing a clear disc from the blind eye of an 11 year old boy and transplanting it to the eye of a 45 year old man whose cornea had become opaque due to a burn from unslaked lime. From 1908 to 1930 interest in eye tissue therapy was again fanned by the work of Elschnig and his co-workers in the Prague Clinic. Of the 203 patients on whom corneal grafting was performed, they recorded 20 per cent success among the cases as a whole, and 73 per cent success in those patients whose leukomas had developed following interstitial keratitis. During the years from 1922 to 1938, the work of Filatov [8] and his associates, who reported 435 keratoplasties carried out in their clinic in Odessa, did much to popularize keratoplasty. These investigators not only restimulated interest in the operation through their development of new instruments, a more perfected technique, and the widening of the indications for corneal transplantation, but it was in this school that the use of the preserved cornea originated.

The most outstanding name in the field of keratoplasty today is that of Castroviejo in New York who, in 1932, reported 300 cases of corneal grafts, 80 of which were performed on human eyes. Since this time credit goes to this investigator for having contributed more than any other to the perfection of sound surgical practice in the present-day methods of eye tissue therapy.

SELECTION OF CASES

Whenever a corneal opacity is the major cause of very poor vision, keratoplasty should be considered. Proper selection of cases is most important, however, for the success of any such operation, and the physician must determine whether the case is favorable for improved vision, whether the operation should be advised for cosmetic effect alone, or whether the results would tend to be unfavorable.

The fate of the transplantation of the cornea depends primarily on the histologic nature of the leukoma found within the recipient eye, with the prognosis of such an operation becoming favorable or unfavorable depending on the degree of opacification discovered there. It is important that the physician conduct a thorough examination prior to the operation to determine the nature of the opacity, the thickness of the cornea, the depth of the anterior chamber, the possible presence of anterior or posterior synechiae, and, in general, the extent to which normal corneal elements can be found within the host. This examination can best be carried out by means of an ophthalmoscope and slit lamp, or, if the leukoma is very dense, by transillumination and infra-red photography.

Those cases which generally afford the most favorable results for the patient are those in which normal intraocular tension is present, the corneal leukoma is not dense enough to cause impairment of vision, the diseased tissue is limited to the cornea, and the central corneal opacities, which will be replaced by the transplant, are surrounded by healthy tissue. Keratoplasty is generally advisable when impaired vision has been caused by phylctenular keratitis, trachoma, rosacea keratitis, familial corneal degeneration, and by interstitial keratitis when the opacity is not too extensive and the transplant remains in contact with fairly healthy corneal tissue.

Those cases which are less favorable for the achievement of ultimate transparency of the graft, but are still likely to give a high percentage of successful results and considerable improvement in vision, are those caused by certain types of corneal dystrophies, superficial corneal opacities resulting from tear gas burns, superficial opacities extending over the entire area of the cornea when most of the area is normal, and Descimetoceles where the whole opacity may be substituted for a corneal graft. In cases where adherent leukomas are present. it is advisable that keratoplasty be preceded by an iridectomy for a successful result.

Where the eye is amblyopic and there is a dense central leukoma present, it is often advisable to perform a corneal graft for the cosmetic effect alone. Prognosis is usually favorable for these cases where the condition is caused by injury which resulted in blood staining of the cornea, in cases of keratoconus, particularly those where apical corneal changes are present and the patient is not aided by contact lenses. and in cases of central circumscribed corneal leukoma with clear peripheral tissue and in the absence of anterior synechiae. The operation may also be advised for patients with a central superficial or deep leukoma caused by interstitial keratitis whose eyes are "quiet" without underlying pathological change in the iris or the presence of synechiae, and whose Wassermann reactions are negative. The prognosis is usually less favorable and should not be advised for patients whose impaired vision is due to gonorrhea blennorrhea. tuberculosis of the cornea, lipoid degeneration of the cornea, severe lime or acid burns, or the more serious types of corneal dystrophy.

Unless preliminary operations have been performed which have prepared a more favorable soil for the final operation, definitely unfavorable results can be expected should keratoplasty be attempted on patients whose eyes present a dense leukoma covering the entire corneal area, in which (particularly after intra-capsular cataract extraction) aphakia is present, where the intra-ocular tension is increased. or where there is corneal cloudiness with a densely vascularized pannus present. For patients with visual disabilities caused by burns (lime, acid or alkali), glaucoma, or perforating ulcers of the cornea, the operation is ill advised. Again, keratoplasty should not be undertaken for those patients who are very uncooperative and may develop a stormy postoperative period, or for those in whom the corneal opacities have been present for many years, particularly where there is pronounced nystagmus or inflammation present. Experience has demonstrated that cases of corneal opacities caused by pemphigus, corneal opacities with extensive anterior synechiae, large corneal opacities with calcareous degeneration, and those with Fuch's dystrophy have not improved with the grafting procedure.

BIOCHEMISTRY OF THE TRANSPLANT

A study of past literature concerning corneal grafts indicates two concepts which have developed relating to the question of the biochemistry of the transplant. The argument which arose centered around the problem of whether the transplant retained its own cellular identity within the recipient eye. or whether it was gradually replaced by the cells of the host. According to the early workers, Lohlein and Salzer,[4] the use of fresh or living tissue was unnecessary since the graft served merely as a temporary framework whose purpose was to guide and support the corneal cells of the host until those cells invaded and gradually replaced the transplant. This theory, which was falsely based on studies of nebulous or opaque transplants in which abnormal corneal elements had been found, has been refuted by modern investigators. Later experimental work in this field has proved that the transplant takes an active part when grafted to the eye of the host by maintaining its own individuality and preserving its separate cellular elements within the parenchyma of the recipient eye.

Castroviejo[4] proved in microscopic studies on transplants removed from six human beings that the original layers of the corneal graft could be recognized as late as several months after the operation had taken place. Fine[9] bears him out in this report when he states that an occasional cross section found in such experimental work would show two layers of Descimet's membrane, the curled edges of one in position, with the new membrane growing across. This proved Filatov's[8] belief that "biologic stimulators" of living tissues can be introduced into a diseased organism by transplantation. and that the regenerative processes of the latter increase while the pathologic disturbances, in turn, diminish or disappear. As Fine[9] has so aptly explained, the cornea is an unusual tissue whose low metabolism determines its small nutritional requirements. While the corneal stroma and endothelium may live indefinitely in aqueous alone, the corneal epithelium has a high metabolic activity which accounts for the rapidity of its regeneration. Castroviejo[4] again found that corneal corpuscular division could take place and that. if the epithelial cells of the graft had been damaged, they might be replaced by the epithelial cells of the host, and likewise a new Descemet's membrane might appear without ensuing nebulosity or opacity. If, however, there was any damage to the stroma of the transplant, it was repaired by the host tissue at the expense of permanent nebulosity or opacity within the graft.

As Fine[9] points out, the absence of blood vessels is of primary importance in order that the transparency of the graft be permanently insured. Should blood vessels be present within the cornea of the recipient eye, the proliferation of fibrous tissue which invariably follows the implantation of a graft, results in opacity of the transplant. Not only is it imperative, therefore, that fresh, living material be employed as the donor tissue, but the successful transplant must be one which is insensitive and has been grafted to an area which receives protection from the sensitive cornea surrounding it.

The success or failure of the numerous methods of grafting technique depends on three factors: the integrity of the host, the use of suitable healthy corneal tissue, and an exact and accurate cutting of the window in order that a perfect, fluid-tight fit be obtained. The two types of transplants employed by present-day surgeons have either round or square perimeters. These in turn, can be classified two ways: by the amount of surface area which is removed, and by the depth or number of layers cut away. Whether the grafts are circular or rectangular in shape makes no difference as long as the edges are smooth and an exact tracing has been made of both the transplant and the defect in order that a perfect fit will be insured. Through frequent experimentation it has been discovered that complete penetration of the full thickness of the cornea, with the removal of a window, variable in area, is not only the most dramatic but the most successful method of replacing the opaque corneal tissue.

All methods of keratoplasty which were employed up to the year 1932 proved that the use of round grafts made with Von Hippel's trephine, as modified, more or less, by the work of Zirm, Elschnig, Filatov and Thomas, had given the best results. Castroviejo, who published the reports of his first experiments in 1932, has made a greater number of improvements in the field of keratoplasty than any other ophthalmological surgeon. This investigator advocates the use of square transplants which have points of reference and, he states, are not only easier to cut and place than round grafts, but have a shape which can be less easily seen several months after the operation. Regarding the relative size of the window to be removed from the recipient eye, Fine proved by his experiments with keratoconus that the large corneal graft which must, of necessity, be cut back into relatively normal corneal tissue, had a greater chance for successful union and ultimate transparency. In order to prevent the formation of adhesions within the chamber and the possible rise of intra-ocular tension, rapid reformation of the anterior chamber is essential to the success of the operation. Surgeons have recently demonstrated a method by which an air bubble is injected into the anterior chamber immediately after the graft has been fitted in place, which obviates this hazard by serving to reestablish the chamber successfully.

Not only has there been a wider development of techniques employed in the actual transplantation of corneal tissue, but surgeons have seen the recent introduction of several types of new instruments designed to reduce the difficulties encountered in cutting the tissues, making exact measurements, and fitting the graft into proper position. To surmount the ever-present danger of injury to the lens, and to minimize the pressure upon the ocular structures, a type of corneal punch has recently been devised for both the round and square type of transplants, which, with the double action of its rounded and dull lower cutting blade, reduces the amount of force required to snip the cornea.[2] Another instrument designed to hold the transplant firmly in place yet relieve the pressure during the grafting procedure is a pillbox type of forceps which is slitted at the ends for entrance of the needles.[1] Brown and Nantz,[3] in an effort to avoid the use of sutures in corneal healing, endeavored to develop a biologic substitute for sutures which would be mechanically strong, non-irritating, and capable of absorption. Through their experiments with fibrin on rabbits, they formed the opinion that it would be unsafe to eliminate sutures completely in operations on human eyes. They demonstrated, however, that the anterior chamber filled immediately when fibrin was dropped on the cornea, and that the substance can act as a reinforcement with which to hold the graft in place as well as a cushion to protect the lens.

DONOR TISSUES

The scarcity of donor material and the difficulties inherent in its preservation have, in past years, presented one of the greatest problems for the eye surgeon. The physician must exercise the greatest care in the evaluation of the donor tissue to be employed. Best results are obtained when the corneal material is fresh and is grafted shortly after its removal from the donor. Transplants can be obtained from various sources: they can be removed from the fellow eye of the patient himself (autotransplant) or from the eye of another individual (homotransplant). Experiments by Castroviejo and Elliott[5] with corneoscleral transplants on rabbits proved that the use of any heterogeneous tissue other than that of the cornea was inadvisable because of its tendency to form an imperfect union and to result, invariably, in opacity of the graft. Homotransplants have been found to supply the best material, and these can be obtained either from patients having eye lesions which require enucleation but whose corneas are normal, from cadavers of either adults or children whose eyes are enucleated shortly after death, or from stillborn infants (seven months to full term) whose eyes are enucleated shortly after delivery.

It has been found that autolysis of the eye can be retarded several days, and that adult eyes can give normal transparency and no marked thickness during a period of from 48 to 72 hours after enucleation. Stillborn eyes, however, develop a more rapid loss of corneal transparency after enucleation, and 18 hours is the maximum period of time allowed before autolysis is expected. In their efforts to extend the short three-day storage period, investigators[18] have conducted many experiments to determine the

efficacy of various mediums which could be useful in the preservation of corneal tissue. They soon disproved the belief that rapid freezing of donor eyes in liquid nitrogen presented a hopeful means of preserving the tissue. While the corneas were clear and well preserved under these conditions, with a minimum amount of physical and chemical change taking place, when grafted they became opaque, having lost the vital life-giving quality. Further research along these lines proved to investigators that for best results the eye should be preserved intact in a Ringer's or normal saline solution at a temperature of from 3 to 4 degrees Centigrade.

One of the greatest and most recent steps taken to advance the cause of corneal tissue therapy has been in the creation and establishment of eye banks throughout the nation. Such agencies have been set up to eliminate the difficulty which has so hindered ophthalmologists in the past, the lack of suitable and fresh donor material. The State of California has two such organizations, the Stanford Eye Bank at 2398 Sacramento Street in San Francisco, and the Estelle Doheny Eye Laboratory at 2131 West Third Street (St. Vincent's Hospital) in Los Angeles. These banks, which act as coordinators between those in need of corneas and those wishing to donate them, make it their object not only to establish sources of supply for salvaged eyes and corneal tissue, but to extend the knowledge and skill required to perform keratoplasties through teaching and research. As storehouses and distributing centers for enucleated eyes, the banks conduct pathological studies on all eyes sent to them, and carry on continual research campaigns designed to widen the sources of supply and to develop new and better methods of preservation.

In issuing instructions concerning those eyes which are acceptable, the eye banks require that the corneas be normal, and that the individuals from whom the eyes are obtained must have had no infectious disease and must have had a negative serologic test for syphilis. Eyes of stillborn infants may be used if the mother had a negative serologic test, and eyes with intra-ocular tumors are acceptable if the tumor does not involve the cornea, iris or ciliary body. Eyes to be removed after death should be protected by careful closure of the eyelids prior to enucleation, and the enucleation should be performed within six hours after death.

In an effort to minimize the nuisance to the physician of sending the enucleated eyes off to the bank, these collection centers supply the containers in which the eyes should be transported, and make the handling of the preserved tissue a simple routine which the hospital or a nurse might carry out with little effort. It is necessary that consent for the use of the eyes be obtained on forms which the bank provides, and that a history form be filled out and accompany each bottle used. The bottle supplied must be sterilized, and the gauze at the bottom moistened with sterile saline solution before the eye is placed in the container. After enucleation the eye should be placed in this sterile bottle immediately, the bottle closed tightly, and then kept in a refrigerator at a temperature of from 3 to 4 degrees Centigrade.

It is through such vigorous attempts to make the restoration of sight through corneal grafting a community-wide project, that the eye banks have done much to further interest in this field of surgery, not only among physicians but among the general public as well.

AVOIDANCE OF VASCULARIZATION

Due to the use of present-day modern techniques, 90 per cent of the patients who undergo keratoplasty may expect to have permanently transparent grafts and considerable improvement in vision. Non-union of the graft occurs only as a result of poor technique, infection, or misbehavior of the patient. The complication which the physician must carefully guard against, however, is opacification of the transplant. While this unfortunate result can occur if there is imperfect coaptation of the edges into the cornea of the host, or incarceration of the intra-ocular structures into the wound with a subsequent development of connective tissue behind the graft, vascularization is its main cause. This process usually involves the infiltration of the transplant by lymphocytes and the appearance of wandering cells which should never be present in the healing of a transparent cornea. According to Castroviejo,[7] once these blood vessels have been formed, treatment by x-ray or radium is useless. It is a wise measure, therefore, if the surgeon guards against this latent possibility by administering such therapy prophylactically for a definite period after the operation.

Involving as it does the fundamental biological principle of the reconstruction of living tissue, the modern surgical procedure of keratoplasty has brought new hope to many who would have suffered blindness or ugliness unnecessarily. The first unsuccessful trials in the field of corneal tissue therapy were due mainly to faulty technique and the improper selection of cases. For too long surgical progress was retarded by misconceptions concerning the actual physiological processes within the eye and by the large number of inadequately reported cases which appeared in the literature and served to add to the confusion. Today, as more surgeons become qualified to perform this operation, as newer and more perfected techniques are being advanced, and as a greater number of eye banks are being established to aid in research, physicians and the public alike are being convinced of the greater opportunity which has been extended to the blind for the restoration of their sight through keratoplasty.

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REFERENCES

1. Arruga, H.: An instrument for keratoplasty, Arch. Ophth., 35:299-300 (March), 1946.

2. Berens, Conrad: Corneal punch for square and rectangular transplantations of cornea, Arch. Ophth., 35:47 (January), 1946.

3. Brown, Albert L., and Frank A. Nantz: Corneal healing:

Adhesive power of aqueous fibrin in the rabbit, Am. J. Ophth., 27:1220-1224 (November), 1944.

4. Castroviejo, Ramon: Keratoplasty—microscopic study of the corneal grafts, Tr. Am. Ophth. Soc., 35:355, 1937.

5. Castroviejo, Ramon: Keratoplasty, Am. J. Ophth., 24:139-155(February), 1941. Also same reference for 24:1-20 (January), 1941.

6. Castroviejo, Ramon: Corneal transplantation, Am. J. Nursing, 46:31-34 (July-August), 1945.

7. Castroviejo, Ramon: Indications and contraindications for keratoplasty and keratectomies, Am. J. Ophth., 29:1081-1089 (September), 1946.

8. Filatov, Vladimir P.: Tissue therapy in Ophthalmology, Am. R. Sov. Med., 2:53-66 (October), 1944.

9. Fine, Max: Optical keratoplasty, Stanford M. Bull., 1:130-135 (May), 1943.

10. Green, Martin I.: A simple technic for corneal transplantation, Arch. Ophth., 33:150-152 (February), 1945.

11. Katzin, Herbert M.: Aqueous fibrin fixation of corneal transplants in the rabbit, Arch. Ophth., 35:415-420 (April), 1946.

12. Knapp, Arthur Alexander: Corneal graft or tattooing with iridectomy? With a brief report on corneal studies after electrocution, U. S. Naval M. Bull., 42:1366-1370 (June), 1944.

13. Leahey, Brendan D.: Corneal transplantation, New Eng. J. Med., 228:387-389 (March 25), 1943.

14. Paton, R. Townley: Sight restoration through corneal grafting, Sight Saving Rev., 15:3-12, No. 1, 1945.

15. Paton, R. Townley: Evaluation of results in a series of corneal transplants, Arch. Ophth., 33:83-85 (January), 1945.

16. Perritt, Richard: Corneal transplantation, Arch. Ophth., 30:14-24 (July), 1943.

17. Shershevskaya, O. I.: Transplantation of the cornea, Am. Rev. Sov. Med., 2:525-530 (August), 1945.

18. Smelser, George K., and V. Ozanics: Effect of quick freezing at very low temperatures of donor tissue in corneal transplants, Proc. Soc. Exp. Biol. M., 62:274-277, No. 2 (June), 1946.

19. Thomas, Charles I.: Corneal transplantation and preliminary iridectomy, Arch. Ophth., 35:170-172 (February), 1946.

20. Thomas, Charles I.: Preservation of corneal tissue for transplantation, Arch. Ophth., 36:321-327 (September), 1946.

21. Thomas, J. W. Tudor: Transplantation of the cornea, Tr. Ophth. Soc. U. Kingdom, 50:127-141, 1930. Also same reference, 57:520-529, 1938.

22. Von der Heydt, Robert: A clear corneal implant acquires dystrophy from its host, Tr. Am. Acad. Ophth., 48:59-61, 1943.

23. Weiner, Meyer, and Bennett, Y. Alvis: Transplantation of the cornea by means of a mechanically obtained beveled-edge segment, Am. J. Ophth., 23:877-881, 1940.

CASE REPORTS

◀ Primary Spindle Cell Fibromyosarcoma of the Gallbladder ◀ Chylothorax

Primary Spindle Cell Fibromyosarcoma of the Gallbladder

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THIS is the report of a case of primary spindle cell fibromyosarcoma of the gallbladder with autopsy findings. It is reported in view of the rarity of the disease and the obvious interest, both surgical and medical, attaching to lesions of the gallbladder. A review of the literature reveals reports of only 37 similar cases. The pathologic findings in a series of 525 patients operated on for gallbladder disease were reviewed by Erdmann. Of these only six had malignant changes (one sarcoma and five carcinoma). Ragius reviewed 8,534 autopsies in which there were 31 cases of primary malignancy of the gallbladder (28 carcimona, two sarcoma and one melanoblastoma).

The popular pathology texts do not mention sarcoma of the gallbladder and it is only with difficulty that the bibliography and literature on this subject is found. For this reason we are including a full bibliography of the subject. Dyrenforth and Jelks reviewed the literature to 1937. Many of their cases from the foreign journals were taken second hand from the reviews of DeGaetani and Triggiani and the bibliography is not complete. The monograph by Karlmark is the best source we were able to find. It presents a full review of the literature to 1932 and includes interesting tables, excellent drawings and plates.

Most of the reported cases present a striking clinical similarity and may be described as follows: Spindle cell fibromyosarcoma of the gallbladder characteristically runs a rapid clinical course, ending in death due to extension and metastasis. The course is almost always less than one year and usually less than six months, although the date of onset of the symptoms is difficult to determine due to the frequent complication of cholelithiasis. The most prominent symptom is constant, severe, right upper quadrant pain. This pain is sharp but not colicky and radiates to the back, occasionally to the right lower quadrant or to the right shoulder. Jaundice usually appears late if at all. A large tender mass is usually palpable and as a rule consists of a greatly distended gallbladder and a moderate-sized tumor. The disease is four times more common in females than in males and it occurs as a rule in the fourth, fifth or sixth decade.

Table 1 is a summary of all the cases of spindle cell fibromyosarcoma of the gallbladder we were able to find in the literature. There were a few others referred to in the literature (Bianchi, 1933; DeGaetani, 1932; Bignami, 1936; Lindenbaum, 1940; Romani, 1932; Hromada, 1933) but we were unable to obtain the journals. These references are added to the bibliography for the sake of completeness. Of the 37 cases reviewed, 29 were in women, six in men, and in two the sex was not stated. The average age was 58 years, and there was a palpable mass in 18 out of 20 cases in which this observation was recorded. The average length of life after the onset of symptoms was about 6.2 months. Stones were found in 30 of the 32 cases in which this observation was recorded. There was one case (Cathcart, 1911) in which the patient lived and was apparently well for 2½ years after operation. In that case the sarcoma was complicated by a cholecystic abscess and empyema. The sarcoma was apparently completely removed.

In addition to the spindle cell sarcomas, we have listed other sarcomata at the foot of Table 1. This list includes five lymphosarcoma, five of the perithelioma type, two melanosarcoma, one angiosarcoma and an "alveolarsarcoma."

CASE REPORT

The patient was a 32 year old, single, white female clerk who was admitted to the Franklin Hospital, San Francisco, December, 1945, complaining of right flank pain, radiating around to the right lower quadrant of the abdomen.

Present Illness: The patient was well until about six months prior to admission, at which time she was awakened at night by a pain in the chest and the right upper quadrant of the abdomen. The pain soon disappeared. After breakfast the following morning she was seized again by sudden severe general upper abdominal crampy pain associated with nausea and vomiting. She brought up mostly undigested food and some "bile." The severe pain "had her doubled up for two hours." Then it gradually decreased and was replaced by a slight steady aching pain in the right lower quadrant, right flank and back. This pain gradually went away over a period of three weeks' time. Her temperature during the acute attack was 100°F. but had been normal since. X-ray of kidneys was said to be negative. There was no further nausea and vomiting, no jaundice or change in character of urine or stool. She was well for four months. About two months prior to hospital admission she noted the onset of general tiredness which became progressively worse. About five weeks prior to admission, she developed a pressing muscular soreness at the lower tip of the right scapula which she attributed to sitting in a draft. There was no nausea, vomiting or change in color of stool.

Family History: The father died of cancer of stomach. There was no other familial history of cancer or gallbladder disease.

Past History: A tonsillectomy had been done in childhood, otherwise no operations, hospitalization, serious illnesses or injuries.

System Review: Negative.

Physical Examination: The patient, a well developed but undernourished white female, was in moderate distress due to right flank and right abdominal pain. General physical examination was essentially negative. Examination of the abdomen revealed moderate tenderness in the right lower quadrant. There was a definite hard irregular slightly movable mass (about 3 cm. by 6 cm.) palpable over the region of the ascending colon. In the flank there was slight tender-

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ness just to the right of the lower thoracic and upper lumbar vertebra.

Roentgen examination of the chest and the colon was essentially negative.

Laboratory: Blood count showed hemoglobin 68% (10 gm.) erythrocytes numbered 3,800,000, leukocytes 11,400.

Urinalysis: Clear, amber; pH 6.4; albumin negative; sugar negative; occ. squamous epithel. and pus cells.

Wassermann and Kahn: Negative. Sedimentation rate: (Wintrobe) 6 mm. in 15 minutes; 26 mm. in 45 minutes; 29 mm. in 60 minutes.

Feces: Dark brown material, formed, no mucus present; occult blood negative.

Operation on December 21, 1945 was performed by Dr. H. B. Stephens through a right rectus incision. The gallbladder and cystic duct were greatly dilated. The gallbladder was removed and two large papillary tumors were found at the mouth of the gallbladder obstructing the cystic duct. Within the gallbladder there was a large clot partly mixed with concentrated bile. There was no local extension of the tumors and the liver appeared free of metastases. Palpation of the other abdominal organs revealed no abnormal masses

TABLE 1.—*Summary of All Cases of Spindle Cell Fibromyosarcoma the Authors Were Able to Find in the Literature*

No.	Date	Author	Sex	Age	Survival after onset	G. B. Palpable	Stones	Pathology
					SPINDLE CELL SARCOMA			
1	1878	Ingalls	F	55	2 mo.	yes	yes	Pred. spindle cell
2	1881	Destree	F	52	1 yr.	yes	yes	Spindle cell sarcoma
3	1897	Griffon	F	76	2 mo.	?	yes	Fibrosarcoma
4	1900	Newjadomski	F	55	1 yr.	?	yes	Polymorphous
5	1904	Landsteiner	M	68	1 yr.	yes	yes	Myosarcoma (spindle cell)
6	1907	Landsteiner	?	?	?	?	yes	Spindle cell (myo) sarcoma
7	1908	Parlavecchio	M	59	1 yr.	no	none	Spindle cell sarcoma
8	1908	Dialti	F	60	2 mo.	?	yes	Spindle cell sarcoma
9	1908	Arheiner	F	59	6 mo.	?	yes	Spindle and giant cell sarcoma
10	1909	Bayer	F	59	1½ yr. ?	yes	yes	Spindle cell sarcoma
11	1909	Bayer	F	65	2-6 mo.	no	?	Polymorphous (? chondro) sarc.
12	1910	Hotes	F	52	3 mo.	?	yes	Spindle cell sarcoma
13	1911	Cathcart	M	45	? lived	yes	yes	Spindle cell sarcoma
14	1911	Brunner	?	?	?	?	yes	Stellate cell sarcoma
15	1911	Strassmann	F	54	?	yes	yes	Giant and round cell sarcoma
16	1913	Thöle	F	38	? alive	?	yes	Fibrosarcoma
17	1914	Schoenlauk	F	49	?	?	yes	Polymorphous cell sarcoma
18	1914	Iwasaki	F	52	1 yr.	yes	?	Spindle and giant cell sarcoma
19	1915	Carson	F	38	?	yes	yes	Round and spindle cells—sarcoma
20	1918	Jaffe	M	45	2 mo.	yes	yes	Polymorphous and spindle cell sarc.
21	1921	Stickdorn	F	59	9 mo.	?	yes	Polymorphous and spindle cell sarc.
22	1926	Brendolan	F	51	?	?	yes	Spindle cell sarcoma
23	1927	Szymonowicz	F	52	6 mo.	yes	yes	Polymorphous cell sarcoma
24	1929	Rolliston	F	56	?	?	?	Spindle cell sarcoma
25	1931	Kaufmann	F	51	2 mo.	?	yes	Polymorphous cell sarcoma
26	1931	Brunschwig	F	55	5 mo.	yes	no	Spindle cell sarcoma
27	1932	Karlmark	F	59	?	yes	yes	Polymorphous cell sarcoma
28	1932	Karlmark	F	77	9 mo.	?	yes	Giant and spindle cell sarcoma
29	1932	Karlmark	F	73	3 mo.	yes	?	Myosarc. with spindle cells
30	1934	Triggiani	M	68	?	?	?	Spindle and round cell sarcoma
31	1935	Erdmann	F	52	5 mo.	yes	yes	Spindle cell myosarcoma
32	1936	Büttner	F	70	1 yr.	yes	yes	Spindle cell sarcoma
33	1937	Dyrenforth	F	72	3 mo.	yes	yes	Spindle cell sarcoma
34	1937	Ragius	M	62	5 wks.	yes	yes	Polymorphic sarcoma
35	1937	Ragius	F	50	2 mo.	yes	yes	Spindle cell sarcoma
36	1939	Oesterlin	F	79	? 3 mo.	?	yes	Spindle cell sarcoma
37	1939	Sammartino	F	63	2 mo.	?	yes	Spindle cell sarcoma
					LYMPHOSARCOMA			
1	1882	Seibert	M	52	?	?	?	Lymphosarcoma
2	1918	Rohdenburg	F	55	2 mo.	?	yes	Lymphosarcoma
3	1921	Magoun	?	?	?	?	yes	Lymphosarcoma
4	1923	Dalla Valle	F	53	?	?	yes	Round cell sarcoma
5	1928	Althabe	F	50	4 or 5 yr.	?	yes	Round cell sarcoma
					ENDO AND PERITHELIOMA			
1	1903	Becker	F	65	13 mo.	yes	?	Hem. endothelioma
2	1907	Bland-Sutton	F	43	?	?	?	Perithelioma
3	1913	Phillips	F	70	15 mo.	yes	yes	Endothelioma
4	1913	Phillips	M	78	3 mo.	?	yes	Endothelial sarcoma
5	1931	Keinkneght	F	69	9 wks.	yes	?	Endothelial sarcoma
					MELANOSARCOMA			
1	1907	Wieting	F	40	?	?	no	Melanoblastoma
2	1937	Ragius	?	?	?	?	?	Melanoblastoma
					OTHERS			
1	1889	Klingel	F	50	?	yes	yes	Angiosarcoma
2	1923	Dalla Valle	M	68	?	?	none	Alveolarsarcoma

and it was felt that the tumor was completely removed.

Postoperative course: About three days postoperatively the patient developed left sided pleurisy with effusion which subsided spontaneously. Her postoperative course was otherwise uneventful and she was discharged in January, 1946.

Following discharge from the hospital the patient's symptoms gradually improved but clinically it was apparent she had metastases and she pursued a downhill course with a drop in weight from 95 lbs. to 82 lbs. shortly before her death. Her RBC and Hgb. went from 3,800,000 and 68% down to 2,000,000 and 30%, shortly before her death, in spite of several whole blood transfusions.

February 8, 1946: The chest was clear to physical examination and fluoroscopy. Reflexes equal and active. There was no adenopathy; there was moderate tenderness and guarding in the right upper quadrant in relation to a small mass felt beneath her surgical scar. February 26, 1946: The RUQ mass was increased in size and clinically it was thought to be an extension into the retroperitoneal space or lymph nodes. There was a slight sensation of fullness on the left in the flank. March 12, 1946: (Last office visit) She was very weak. There were masses in both flanks. The one in the right flank was larger. She was seen frequently at home in Marin County, by her local physician, where she received supportive treatment until she expired on April 3, 1946.

Pathological Report: Surgical Specimen: Gross Description: Tissue removed reveals a gallbladder outline 11 cm. in length and 5 cm. in diameter with quite a bit of roughness of the surface. Near the neck of the gallbladder there is seen induration and apparent proliferation of tissues. The wall of the gallbladder is thickened and the lumen is filled with clear watery sanguinous fluid. At the base of the gallbladder are several polypoid friable structures protruding 1 cm. into the lumen proper and grossly invading the gallbladder wall.

Microscopic Description: This neoplasm presents fusiform anaplastic cells usually bi-polar and forming distinct cytoplasmic strands, although without clearcut evidence of collagen deposition. The nuclei are oval and show much mitotic activity and pyknoses. Scattered throughout are frequent giant cells with many nuclei similar in structure to the mononucleated cell forms. Necrosis is evident throughout as well as some pigment and apparent hemorrhage. No specific pattern is noted in the cell arrangement, except for parallel sheets of fusiform cells.

Diagnosis: Sarcoma of gallbladder.

Autopsy Report: The body was rather emaciated, but was otherwise externally negative. There was about 1000 cc. of clear fluid in the abdominal cavity and a few old adhesions at the site of surgical operation. The organs were negative, except for some tumor tissue in the mesentery. The autopsy was limited to the abdomen; but palpation through the diaphragm revealed no abnormalities in the chest. The liver was smooth and showed no gross evidence of tumor except at the site of the gallbladder, there was a tumor, 3 to 4 cm. in size and which extended directly into a larger tumor in the adjacent mesentery. The spleen and pancreas showed no tumor and no gross abnormalities. The adrenals were very large and completely replaced by tumor, each now measured 10 cm. in size. No adrenal tissue was seen. The tumor in the adrenal area was granular in consistency. The kidneys were rather pale but showed no evidence of abnormality and no tumor. Internal genitalia were normal except for a tumor implant in the left ovary. The intestinal tract contained no tumor. All other portions of the body were normal.

Microscopic Description: Tumors were found in the adrenal, at the old gallbladder site, in the ovary and in the mesentery, all of similar pattern to that of the original surgical specimen. The cells are fusiform with poorly defined outline. Collagen or reticulum was not demonstrated. The oval nuclei sometimes had a prominent nucleolus, and these nuclei often showed mitoses, much pleomorphism, and many nuclei. The tumor showed much necrosis, hemorrhage, and blood pigment deposition. There is no pattern in the tumor such as would indicate a neurogenic, and certainly no suggestion of an epithelial type of arrangement. Special stains were not informative. No cross striations were seen. Kidneys showed a moderate pyelonephritis, hemoglobin casts, and congestion about the glomeruli, but no inflammatory infiltration.

Pathological Diagnosis: Spindle cell fibromyosarcoma of the gallbladder with metastases to the adrenals, ovaries and mesentery.

Discussion: That this tumor represents a primary neoplasm of the gallbladder seems to be true beyond all reasonable doubt. At operation the tumor was limited entirely to the gallbladder and its neck, and palpation of other abdominal organs revealed no tumor elsewhere. At autopsy it is true that the adrenals presented perhaps the most striking possible source of tumor, but the pattern of the tumor is not at all characteristic of the adrenal, and the fact that both adrenal tumors were of equal size favors their both being metastatic. There was no clue as to any other possible primary origin. In a few areas these cells are arranged in fasiculi, but in no place is there actually distinct pattern, such as would warrant the identification of the specific tissue of origin. Special and differential stains fail to reveal the actual type of cell other than its being sarcomatous. The fact that the collagen is not found and that the van Gieson's stain does not show any significant amount of connective tissue somewhat supports the opinion that these cells are of smooth muscle origin. This is entirely possible and perhaps even probable, but an anaplastic fibrosarcoma which did not form collagen or significant reticulum would present an identical staining characteristic. The scattered giant cells which are noted, are only multinucleated forms of the fusiform cells which make up the major cell type. No cross striations are seen in these large multinucleated forms. There is moderate vascularity in the tissue, but nothing that would support the blood vessels as possibly being the tissue of origin.

Investigation of the different types of gallbladder tumors which have been reported in the literature shows that most of these tumors have been classified on the simple structural detail of the cells involved. Such being the case, the term spindle cell sarcoma is most frequent and accounts for at least two-thirds of these tumors reported. The remaining percentage is made up by such descriptions as round cell sarcoma, polymorphic sarcoma and giant cell type, etc. A few of the tumors have received specific tissue names such as myosarcoma, chondrosarcoma, etc. Of the malignant mesoblastic tumors of the gallbladder it is very probable that a great majority of them will be on the basis of either connective tissue origin or smooth muscle. The distinction between these two types of cell type may be very difficult or impossible, particularly in anaplastic tumors.

Because most of the sarcomas of the gallbladder are a cellular type of spindle-cell tumor, the choice of an adequate term to describe this type of tumor is not easy. This spindle-type of pattern is very likely to originate from one of two tissues: either a fibroblast or a myoblast. In both types of tumors, scattered giant cells and multinucleated cells are to be expected. Special stains occasionally help in distinguishing the one type of tissue from the other, but more frequently than not these procedures fail to make this distinction, particularly as the tumor becomes more anaplastic. Thus, in naming such a tumor a simple descriptive name

indicating the predominant shape of the cell type, such as simple spindle-cell sarcoma could be used. A second choice would be to choose a name such as fibromyosarcoma of the gallbladder, thus indicating that probably both cell types are concerned in the process and certainly suggesting that each specific cell type is difficult to separate from the other. In the tumor which is being reported, it is felt that the evidence histologically favors the essential background cell as being smooth muscle and that the term which most adequately describes this tumor is a spindle-cell fibromyosarcoma.

SUMMARY

1. The literature pertaining to sarcoma of the gallbladder is briefly summarized and a full bibliography of the subject is listed.

2. One case of spindle-cell fibromyosarcoma of the gallbladder is reported.

3. The name spindle-cell fibromyosarcoma is suggested for this type of gallbladder tumor.

REFERENCES

1. Althabe, A., and di Paola, G.: Sarcoma de la vesicula biliar, La. Sem. Med., 35:775-778 (Sept.), 1928.

2. Arheiner, J.: Sarcoma de la vesicula biliar, Gaz. Med. de Strassbourg, 67:81-83 (Jan.), 1908.

3. Bayer, H.: Zwei Falls von Primären Sarkom der Gallenblase, Beiträge z. Path. Anat. und allg. Path., 46:429-436 (Sept.), 1909.

4. Becker, W.: Primary endothelioma of the gallbladder, J.A.M.A., 40:903-909 (Apr. 4), 1903.

5. Bianchi, L.: Osteosarcoma, rare type of human tumor, Boll. d. Soc. Med. Chir., Pavia, 47:811-826 (Nov.), 1933.

6. Bignami, F.: Un caso di sarcoma della cistifelles, Boll. d. liga Ital. P. I. lotta contro il cancro, 10:51 (Jan.), 1936.

7. Bland-Sutton: Case report—perithelioma of the gallbladder, Arch. Middlesex Hosp., London, 11:1 (Jan.), 1907.

8. Brendolan, G.: Dei tumori primitivi della cistifellea con esposicione di un caso di sarcoma, Ann. Ital. di. chir., 5:592 (June), 1926.

9. Brunschwig, A.: Primary sarcoma of the gallbladder, J.A.M.A., 96:680-681 (Feb. 28), 1931.

10. Brunner F.: Ein primäres sarcom der gallenblase, Correspondence f. Schweiz, Aerzte Basel, 41:71-72 (Jan.), 1911.

11. Büttner, A.: Über ein sarkom der gallenblase, Zeitschr. f. Krebsforsch, 44:59-65 (May 15), 1936.

12. Carson, N. B., and Smith, G. M.: Primary sarcoma of the gallbladder, Annals of Surgery, 62:688-692 (Dec.), 1915.

13. Cathcart, R. S.: Primary sarcoma of the gallbladder, Southern Surg. and Gyn. Tr., 24:198-207, 1911.

14. DeGaetani, G.: Contribulto allo studio del sarcoma della cystifellea, Pathologia, 24:541-551 (Aug.), 1932.

15. Destree, A.: Sarcoma de la vesicule biliaire, LaPresse Med. Belg., 33:115 (Feb.), 1881.

16. Dialti, G.: Sarcoma della cistifellea, Atti d. R. accademia dei Fisiocsitici in Siena, 20:697 (Aug.), 1908.

17. Dalla Valle, A.: Sarcoma of the gallbladder, Gior. di. Clin. Med., Parma, 4:543 (Nov.), 1923.

18. Dyrenforth, L. Y., and Jelks, E.: Sarcoma of the gallbladder, Southern Med. J., 30:49-51 (Jan.), 1937.

19. Erdmann, J. F.: Malignancy of the gallbladder, Ann. of Surg., 101:1139-1143 (May), 1935.

20. Griffon and Segall: Sarcoma de la vesicule biliaire propagé au foia, Bull. Soc. Anat. de Par., 72:586-589 (July), 1897.

21. Hotes, P.: Ein Fall von primärem sarkom der gallenblase, Inaug. Dissertation, Leipzig, 1910.

22. Hromada, G.: Myoma of gallbladder, Zentralbl. f. chir., 60:2254-2256 (Sept. 12), 1933.

23. Ingalls: Sarcoma of pancreas, liver, and gallbladder, The Boston Medical and Surgical J., 98:601-603 (May 9), 1878.

24. Iwasaki, K.: Über. das primäre sarkom der gallenblase, Arch. f. klin. chir., 104:84 (Jan.), 1914.

25. Jaffe, R. H.: Das primäre sarkom der gallenblase, Zentralbl. f. allg. Path. u. Path. Anat. (Jena), 29:571-576 (Nov. 15), 1918.

26. Karlmark, E.: Die lokalisationstendenz bei metastasierung durch die venen in die leber, Acta. Pathologica Scan. (Suppl. 13), 11-88, 1932.

27. Kaufmann, E.: Kaufmann's Spezielle Path. Anat. (Book), 949, 1931.

28. Kleinknecht, A., Nessman, V., and Oberling, C.: Epitheliosarcome de la vesicule biliaise, Assoc. Francas P. l'Etude du Cancer, Bull., 20:7 (Jan.), 1931.

29. Klingel, K.: Beiträge zur chirurgie der gallenblase, Beih. zur klin. chir., 5:101-128 (Feb.), 1889.

30. Landsteiner, K.: Plattenepithelcarcinom und sarkom der gallenblase in einem falle von cholelithiasis, Zeit. f. klin. Med., 62:427-433 (June), 1907.

31. Landsteiner, K.: Uber das sarkom der gallenblase, Wien. klin. Wchnschr., 17:163-165 (Feb. 11), 1904.

32. Lindenbaum, I. S.: Sarcoma of gallbladder, Vestnik Khir., 60:279-287 (Oct.), 1940.

33. Magoun, J. A. H., Jr., and Renshaw, K.: Malignant neoplasia of the gallbladder, Annals of Surg., 74:700-720 (Dec.), 1921.

34. Moura, P.: Sarcoma of gallbladder, Folha Med., 13:412-415, 1932. Zentralbl. f. Chir., 60:2254-56 (Dec. 15), 1932.

35. Newjadomski, P. M.: Ein fall von primareum sarkom der gallenblase mit difusser sarkomatöser infiltraten der aerosa der unterleisorgen, Med. Obsenje Mosk., 53:190-195 (Feb.), 1900.

36. Oesterlin, E. J., and Meudelson, L. H.: Report of a case of sarcoma of the gallbladder, Ohio State Med. J., 35:603-606 (June), 1939.

37. Parlavecchio, G.: Uber einen fall von primärem sarkom einer empyematösen gallenblase, Arch. f. klin. chir., 87:365-379 (Oct.), 1908.

38. Phillips, S.: Case report—Sarcoma of the gallbladder, The Lancet, 1:1442 (May 24), 1913.

39. Ragius, A. B.: Pleomorphic-cell sarcoma of the gallbladder (report of two cases), Am. J. of Cancer, 29:722-728 (Apr.), 1937.

40. Rohdenburg, G. L.: Lymphosarcoma of the gallbladder, N. Y. Path. Soc. Proceedings, 18:20-27 (Jan.), 1918.

41. Rolleston, Sir H. D., and McNee, J. W.: Diseases of the liver, G. B. and bile ducts, 3rd Ed., MacMillan and Co., London, 691 and 754, 1929.

42. Romani, A.: Primary sarcoma of gallbladder, Boll. e. mem. Soc. Piemontese di. chir., 2:1062-1081 (Dec.), 1932.

43. Sammartino, R.: Sarcoma leiomioblastogeno de la vesicula biliar, Rev. Asoc. Med. Argent., 53:752-755 (Aug. 15), 1939.

44. Schoenlauk, A.: Ein beitrag zur kasuistik des primären sarkoms der gallenblase, Frankfurt. Ztschr. f. Path., 15:307-314 (Apr.), 1914.

45. Seibert, A.: Sarcoma of liver, Medical Record (N. Y.), 21:299 (Jan.-June), 1882.

46. Strassman, P.: Ein primäres sarcom der gallenblase, Zeits. f. Geburt. u. Gyn., 69:292 (Mar.), 1911.

47. Stickdorn, J.: Primäres gallenblasensarkom, Inaug. Diss. (Gottingen), 1921.

48. Szymanowicz, J.: Sarcoma of the gallbladder, Travaux des Inst. d'Anat. Path. des Univ. zu Bologne, 2:11-171 (Feb.), 1927.

49. Thöle, A.: Neue Deutsche Chir. (Book), 7th Ed., 336, 1913.

50. Triggiani, A.: Contributo allo studio dei tumori mesenchimali di tipo immaturo primitivi della cistifellea, Sperimentale Arch. di Biol. Morm. e. Path., 88:615-634 (Nov.), 1934.

51. Wieting, Prof., and Hamdi: Uber die physiologishe und pathologishe melanmpigmentiesung und den epithelialen ursprung der melanoblastome, ein primäres melanoblastom der gallenblase, Beitr. z. Path. Anat. U. z. allg. Path., 42:23-84 (July 21), 1907.

Chylothorax—A Case Report

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MOST authors feel that chylothorax is more common than the number of reported cases would indicate. Of nine cases reported from the Mayo Clinic up to 1944, seven occurred in the 11-month period preceding the report.[4] It was estimated that about 66 cases of traumatic chylothorax had been reported in the literature. Yater,[7] in 1935, considered that 80 cases of non-traumatic chylothorax had been reported. This made a total somewhat greater than that estimated by Jahsman.[2] It is generally conceded that in traumatic chylothorax under conservative therapy the mortality rate is about 50 per cent; it is higher in non-traumatic cases because of the usual gravity of the underlying cause. We believe that the condition is sufficiently rare and of sufficiently serious importance when it does occur, to make valuable the report of another traumatic case and the effective treatment of it.

CASE REPORT

The patient, a woman aged 36 years, had been under observation for three years, during which time she had required hospitalization five times because of mitral stenosis, auricular fibrillation and congestive failure. In April, 1944, bronchopneumonia developed; the condition responded to sulfamerazine therapy and although a pleural friction rub developed, improvement was steady and the patient was able to leave the hospital after 11 days.

On July 10, 1944, the patient presented herself at the Clinic with a right hydrothorax. At this time, 500 cc. of bloody fluid was aspirated; two days later 1000 cc. was removed. Thoracentesis was repeated every few days with the removal of approximately 1200 cc. of fluid each time. At first the fluid was bloody, then it became pinkish white in color and finally it assumed the characteristic milky appearance of chyle. Culture of the fluid was sterile. Chemical analysis revealed many lymph cells and red blood cells, a total lipid content of 1.9 mg. per cent, protein content of 3.8 mg. per cent, and non-protein nitrogen of 28 mg. per cent. The specific gravity of the fluid was 1.020 and upon standing the fluid divided into two layers, the more creamy in character rising to the upper level.

The evidence seemed quite complete that we were dealing with a constant secretion of chyle from a tear in the lymphatic duct—a tear probably resulting from severe coughing. Aspiration of air and fluid to allow expansion of the lung with obliteration of the source of chyle leakage was undertaken. Some mild discomfort occurred with the induction of increased negative pressure and the shifting of the heart toward the right thorax but eventually our purpose was accomplished. The lung expanded and adhered to the right thoracic wall, apparently obliterating the tear in the duct. During this interval there were recurrent attacks of fibrillation but the dyspnea gradually lessened as the lung expanded and the fluid was kept at a minimum. There was considerable weight loss. During a period of three and one-half months approximately 45,000 cc. of fluid was aspirated. This constituted a great drain on the nutritional state of the patient even though she tolerated nourishment rather well during this interval. Multiple transfusions of whole blood and plasma aided in maintaining adequate nutrition. At the time of dismissal the patient was in good condition.

Chylothorax is the result of the escape of chyle from the thoracic duct or its radicals. It occurs chiefly on the right side due to the fact that the lymphatic duct ascends into the thorax through the aortic opening of the diaphragm on the right side of the spine, as far as the fifth thoracic vertebra. At this point it crosses over and ascends on the left side ultimately joining the left subclavian vein at its junction with the internal jugular vein. Chylothorax results from trauma to the duct, or obstruction of the duct or of the great veins. Bruises to the thorax, fractures of the clavicles or ribs, severe coughing, etc., may cause chylothorax. The delay in symptoms following trauma or unusual coughing is due to the fact that the thoracic duct is an extrapleural organ so that the chyle first accumulates in the retropleural space and does not appear in the pleural space until perforation of the pleura occurs from the pressure of the accumulated fluid. Non-traumatic chylothorax usually results from pressure of mediastinum nodes which are enlarged because of metastatic malignancy, tuberculosis, or lymphoblastoma, to produce pressure on the lymphatic duct. In many cases of chylothorax no logical etiological factor can be demonstrated. Such cases are probably traumatic in origin.

The diagnosis of chylothorax is made by examination of the aspirated fluid. Usually the fluid is colored by blood at the first aspiration, particularly in traumatic cases, but it soon assumes the characteristic milky-white color of chyle. Its oily content may be detected when it is dropped on a glass slide. When allowed to stand in a test tube, the creamy layer develops at the top of the tube. Sudan 3 will readily bring out the fatty nature of the fluid. The specific gravity is in excess of 1.012. The cell count is large with lymphocytes predominating. Chemical analysis shows a fat content varying from 0.4 to 4 per cent.

Treatment of chylothorax consists chiefly of aspiration of fluid and the maintenance of a negative pressure to encourage expansion of the lung. This not only relieves the dyspnea but also provides opportunity for adherence of the lung to the pleura with possible obliteration of the source of leakage of chyle. In one instance of persistent chylothorax, apparent cure followed interruption of the phrenic nerve on the affected side;[3] the resulting elevation of the diaphragm presumably aided in closing the perforation of the thoracic duct in the lower part of the thorax. Supportive care with particular emphasis on nutrition because of the deprivation of the food elements which are contained in the aspirated chyle is very important. Some beneficial results have been reported from the intravenous injection of the aspirated chyle[5] but at least one death, presumably anaphylactic in nature, has been reported from this procedure.[6] Surgical attempts at repair of the thoracic duct have not been successful.[1]

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REFERENCES

1. Dorsey, Joseph, and Morris, George E.: Traumatic rupture of the thoracic duct with chylothorax, J.A.M.A., 119:337-338 (May 23), 1942.

2. Jahsman, W. E.: Chylothorax: brief review of literature, Ann. Int. Med., 21:669-678 (October), 1944.

3. Nowak, S. J. G., and Barton, P. N.: Chylothorax: report of a case arrested by phrenicotomy, J. Thoracic Surg., 10:628-634 (August), 1941.

4. Olsen, Arthur M., and Wilson, George T.: Chylothorax, J. Thoracic Surg., 13:53-62 (February), 1944.

5. Schnug, Edward, and Ransohoff, Joseph: Traumatic chylothorax—a case treated with intravenous chyle, Surgery, 14:278-281 (August), 1943.

6. Whitcomb, B. B., and Scoville, W. B.: Postoperative chylothorax; sudden death following the infusion of aspirated chyle, Arch. Surg., 45:747-753 (November), 1942.

7. Yater, W. M.: Non-traumatic chylothorax and chylopericardium; review and report of a case due to carcinomatous thromboangiitis obliterans of the thoracic duct and upper great veins, Ann. Int. Med., 9:600-616, 1935.

California Cancer Commission Studies*
Chapters XIII and I-A

Cancer of the Tonsil and Pharynx

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ACUMEN in diagnosis is not a heritage, it is the result of clear thinking and constant attention to details. Each patient who comes to a physician is entitled to the best. Therefore the time and effort spent in preparing these few pages was with the hope that the reader would be stimulated and encouraged to do two things. First, to review mentally the cases of cancer of the tonsil and pharynx he had seen, the ultimate outcome of them and the responsibility for that outcome; second, to encourage physicians to maintain the highest standards of diagnosis for such cases.

CANCER OF TONSIL—SYMPTOMS

Cancer of the tonsil is rare. Unfortunately its early stages are often relatively asymptomatic, and *the usual symptoms are only those of a feeling of discomfort, or unilateral tonsillar enlargement, or a sense of local irritation.* This lack of subjective symptoms often persists until the tonsil and even the surrounding tissues are replaced by a fungating, ulcerated mass that has gross metastasis as evidenced by enlarged, hard, cervical lymph nodes. *Pain is usually a late symptom* and its presence depends on the proximity of the lesion to an important nerve trunk.

DIAGNOSIS

All too often the patient with a complaint of tonsillar irritation receives only a cursory examination. As a result it is not realized that there is an asymmetry or that the tissues surrounding a tonsil crypt opening are indurated or that a tonsil tag does not appear normal. The patient is dismissed after a "throat swabbing" and with a prescription for a gargle. A few months later the diagnosis is all too evident because of a large ulcerative mass and metastatic lymph nodes. It is only then realized that cancer was the cause of the asymmetry or irritation. Unfortunately the chance of cure is usually gone by then.

Adequate inspection of the tonsillar area is not difficult and does not require special instruments. A tongue blade, flashlight and finger cot are all that is needed. If there is a hyperactive gag reflex, there should be no hesitancy in applying one of the effective topical anesthetics. One very valuable procedure almost always omitted is palpation. The visual examination may reveal no asymmetry or apparent change from the normal. *Digital examination* will often reveal differences in tissue density and will give one a rough idea of the extent of invasion of a cancer.

Diagnosis is always by microscopic examination of a biopsy specimen. *The presence in a tonsil of a mass, or an ulcer, or of an area of tissue that feels different than the surrounding tissues demands immediate biopsy.* If the involved area is confined to the tonsil this can be done by tonsillectomy. When this is not feasible, representative portions of the involved area should be removed. In either event all the tissues removed must be submitted for pathological examination. A negative biopsy does not mean "no cancer"; it means "take another biopsy." It is wise when doing tonsillectomies in adults to submit the tonsils to a pathologist for at least gross examination.

TREATMENT

Cancer of the tonsil is seldom, if ever, recognized early enough to permit any assurance that it has not metastasized to its tributary lymph nodes. This being the case, *simple tonsillectomy is never sufficient,* even though the pathological examinations show a wide margin of normal tissue. *Adequate radiation therapy is essential* in even the earliest cancer of the tonsil and must be directed to both the tonsillar area and its tributary lymph nodes. To omit radiation therapy is to deny the patient a chance for a cure of the cancer. Accepted radiological practice for these lesions consists of daily doses of x-ray to the involved areas, to full tolerance of the tissues. In selected cases this should be supplemented by interstitial radium or radon.

Advanced lesions with evident metastasis should never be subjected to operative procedures other than a biopsy for diagnosis. Extensive x-ray therapy is the only method of treatment for such cases. The prognosis in such cases is bad.

CANCER OF THE PHARYNX

The pharynx conveniently divides itself into three divisions, the nasopharynx, oropharynx, and hypopharynx. The oropharynx is the only one of these easily examined by direct vision, and is singularly free of cancer.

The nasopharynx and hypopharynx are readily inspected by the indirect method wherein one uses a head mirror as a source of reflected light and a laryngeal or pharyngeal mirror for reflecting the

* Organized by the Editorial Committee of the California Cancer Commission.

image. Technical details of this examination are readily mastered. Facility in the use of these instruments, in the understanding of mirror images and in differentiation between normal and abnormal findings comes with practice. Only by making this procedure routine in all physical examinations can one become facile at it and acquire a clear mental picture of the variations that constitute "within the limits of normal." In these areas, as elsewhere, palpation can and frequently will reveal important information. The gag reflex is a great nuisance but will readily succumb to local anesthesia.

NASOPHARYNX

Cancer of the nasopharynx is especially insidious and the lesion frequently causes no symptoms. This makes it imperative that every doctor learn to do adequate nasopharyngeal examinations and that he include them in his routine physical examinations. In some cases, pain or discomfort in or about the eye or ear will be an early symptom. Persistent pain along the distribution of the first and second divisions of the fifth cranial nerve necessitates a careful examination of the nasopharynx. All too often the cervical masses of metastasis to the lymph nodes are the only symptom that sends a patient to his doctor. This lesion has a predilection for Chinese in the ratio of 14 to 1.

The metastatic masses frequently are out of all proportion to the initial lesions. The primary lesion is often found only after diligent search of the nasopharynx and numerous biopsies of all suspicious areas. *Nasopharyngeal cancer is the most common, non-apparent primary tumor, responsible for cervical metastasis.* These tumors spread early and rapidly, invading extensively locally, as well as spreading to distant areas. In all cases basal skull films are indicated at the time of diagnosis. Whenever there is unilateral cervical adenopathy, the nasopharynx always should be carefully searched.

Operation is of no value. An adequate course of radiation therapy is the only form of therapy that can be advised. The number of reported five-year cures is so small that one must conclude that therapy is essentially palliative. However, the fact that there are some cures makes it imperative that all cases receive intensive radiation. These tumors are very radiosensitive.

OROPHARYNX

This area is seldom the site of a primary neoplasm. Occasionally one finds a pedunculated papilloma or fibroma, islands of hypertrophied lymphoid tissue or a mucus cyst, but rarely a cancer. A mixed tumor of a minor salivary gland is very rarely found in this area. The oropharynx is frequently invaded directly by cancer arising in the nasopharynx, tonsil, base of tongue, or hypopharynx. Thus almost invariably, a visible tumor of the oropharynx is either benign or a sign of late cancer in an adjacent area.

Tertiary lues may produce a nontender swelling on the posterior pharyngeal wall. If untreated it will break down and produce a characteristic stellate scar. "Cold abscess" from tuberculosis of the cervical spine or deep lymphatics usually presents on the lateral and posterior walls. Occasionally one finds a residual tumor mass following incomplete resolution of a retropharyngeal abscess. Exploration will show semi-inspissated or caseous material, evacuation of which leads to prompt recovery.

One word of warning! Do not attempt to remove, explore, or biopsy any pharyngeal mass until you are certain it does not pulsate. The pharynx contains large blood vessels that do not always follow textbook illustrations.

HYPOPHARYNX

This area does present an occasional benign tumor, such as a lipoma, fibroma or papilloma. Cysts of the epiglottis, glosso-epiglottic fold, and around the foramen cecum are rare but must be kept in mind. Their treatment is surgical removal.

Cancer of the hypopharynx is not uncommon. The greatest percentage is of epithelial origin and is therefore carcinoma, usually of the squamous cell type. Lymphosarcoma is less frequently encountered.

Any complaint of pain or discomfort in the throat, of dysphagia, or of a burning sensation, especially if these are associated with pain radiating to the ears, demands careful examination of the hypopharynx, before the patient is sent on his way with a diagnosis of neuritis, neuralgia or globus hystericus. The examination should include visualization of the base of the tongue, pyriform sinuses, ary-epiglottic folds and epiglottis. This is usually done with head mirror and laryngeal mirror. Topical anesthesia is a valuable aid to securing adequate visualization. There should be no hesitancy in using a finger to palpate suspected areas. Where doubt exists, one should resort to direct laryngoscopy.

The commonly accepted method of treatment for cancer of the hypopharynx is a full course of radiation therapy. Attempts at surgical removal of cancer in this area have been generally unsuccessful. The operative mortality is high, and there is frequently local recurrence. Early lesions of the epiglottis, especially if confined to the upper half, may be treated surgically.

SUMMARY

Cancer of the pharynx or tonsil is not rare. In the early stages its symptoms are very minimal and frequently are only mild, persistent soreness, a burning sensation, mild dysphagia, slight "stuffiness" of the ears, or some similar complaint. Such complaints require careful examination of the entire pharynx, using a head mirror, pharyngeal and laryngeal mirrors and the finger. Any small ulceration, projection or tumor, or area of changed tissue density, should be biopsied. Not infrequently these patients present themselves with an initial complaint of a "neck tumor" due to cervical lymph node metastasis. In any case of unilateral cervical adenopathy careful search of the pharynx for a cancer is a *must*.

In general, malignant lesions of the tonsil and

pharynx have a low five-year survival rate in spite of intensive treatment. This is because the diagnosis is seldom made when the cancer is in its early stages. Good results have been and will be obtained in early cases treated *adequately*. Good results cannot be expected in this or any other cancer, when therapy is instituted after metastases have appeared. Delay in diagnosis assures a fatal outcome. Neither you nor your patient are entitled to temporize with a condition that could be cancer. The patient's entire future depends on your making an early, correct diagnosis and seeing to it that proper therapy is started at once.

"Cancer of the Larynx," by Simon Josberg, M.D., Chapter XIV of the California Cancer Commission Studies will appear in this section of the March issue of CALIFORNIA MEDICINE.

The Responsibility of the General Practitioner in Neoplastic Disease

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THERE is no difference in respect to the practitioner's legal duty to a patient with neoplastic disease than in any other case. When the physician undertakes to render professional services to any patient, he assumes certain legal obligations. He must possess the degree of skill and knowledge commonly possessed by other reputable physicians in the community; he must exercise a degree of care, diligence, and judgment equal to that of other practitioners who engage in treating similar cases; and he must keep abreast of progress in the profession, utilizing accepted and standard procedures in diagnosis and in treatment.

The relationship of physician and patient is one of trust and confidence, requiring that the physician act at all times with the utmost good faith toward his patient. This demands for example: that the attending physician, if he doubts his ability to care for a particular case, must so inform the patient; and that, if he feels that a consultant would be of benefit, he must so advise the patient or he must call in a consultant.

The attending physician must act, at all times, in a manner consistent with the standard of practice in the community. The standard of practice is established by what the ordinary, reputable physician would do and what he would refrain from doing in the care of a similar case.

The standard of practice applies to diagnosis as well as to treatment. If the ordinary practitioner would, in the face of a particular case, utilize certain procedures, x-ray, biopsy, etc., the standard is thus established in that type of case. And standard procedures must be followed if the physician is to avoid a legitimate charge of malpractice in the care he renders to a case of that particular kind.

There is being manifested in this locality an increasing interest in, and attention to, the problem of cancer. The lay group are being impressed with the importance of early diagnosis in cancer. If there is apparent delay in diagnosis, or if there is a failure to take advantage of facilities provided, there is likelihood of suit.

For illustration, we have recently had a case wherein a patient, complaining of relatively vague digestive tract symptoms, was carried along without an x-ray examination and without definitive diagnosis for 15 months. The patient then presented a massive carcinoma of the stomach with metastases. It is not unlikely, in such circumstances, that a court would find against the physician-defendant. In another case, a physician "awaited developments" when a woman of about 45 presented a small mass in the breast. This was unfortunate for the patient and eventually for the physician.

There is no doubt but that the practitioner can immeasurably safeguard himself, by making use of the nearest tumor board, whenever he has a patient who may have neoplastic disease. If there is the slightest doubt in the physician's mind, and he is not able to assure himself that the patient does not have cancer, then he should protect the patient and safeguard himself by taking advantage of the consultative facilities which are available.

The people of California's communities are becoming informed of the existence, purpose, and method of functioning of tumor boards and detection clinics. The fact that many of our physicians are utilizing these facilities in connection with their doubtful or problem cases, is tending to establish their use as being within the standard of practice. It must not be forgotten that the failure to render care consistent with the standard of practice constitutes malpractice, if the patient thereby suffers injury.

In the past the majority of malpractice claims associated with cancer cases have been based upon the allegation of x-ray injury. In the future, it is readily foreseeable, there will be more suits based upon the claim of failure to diagnose, or delay in diagnosing, an existing malignancy. If there has, then, been a failure to make use of facilities, about which even the layman is informed, it must be anticipated that that failure in itself will almost be regarded as prima facie negligence on the part of the attending physician.

It is well known that malpractice claims are not uncommon in California. A physician is unwise indeed who, in this area, does not take positive steps to keep himself out of court.

California MEDICINE

OWNED AND PUBLISHED BY THE CALIFORNIA MEDICAL ASSOCIATION
450 SUTTER, SAN FRANCISCO 8 PHONE DOUGLAS 2-0062

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EDITORIALS

Alcohol and Man

Considering the prevalence of alcohol in the national diet, the incompleteness of our knowledge concerning both the biochemistry and pharmacology of this substance is worthy of remark. Biochemists in particular have fought shy of work on alcohol, while much of the research into the effects of the drug on the nervous system has been more emotional than objective. As a matter of fact it has been apparent to some of those working with alcohol that their colleagues believe the field of alcohol research to be in some vague way immoral. Moreover, the medical literature leaves no doubt that the publication of findings regarding the effect of alcohol on the human nervous system not in consonance with the beliefs of those long established in the field calls forth a storm of criticism of an acid type, but little objective evidence by the critics in refutation.

In spite of this situation, our knowledge of the metabolism of alcohol, and of its effect on the nervous system, has been considerably enriched in the past fifteen years. Considering the first of these subjects, it has now been shown beyond any doubt that at least the primary step in the oxidation of alcohol takes place in the liver, although brain and possibly some other tissues may participate to a very limited degree. Thus liver tissue *in vitro* and the perfused liver both are capable of oxidizing alcohol, the final product being acetic acid. Presumably in the intact animal this is further burned to carbon dioxide and water, although the possibility that there are other pathways of metabolism which can result in storage of energy derived from alcohol is by no means a remote one. Actually, there are several things which tie in the metabolism of alcohol with that of carbohydrate. Thus it has been shown that a prolonged fast will considerably reduce the rate of alcohol metabolism, but that the administration of a single dose of glucose promptly returns the rate to normal. Thus it would seem that the simultaneous oxidation of carbohydrate enhances the burning of alcohol. Along the same lines, administration of insulin will increase the burning of alcohol about 50 per cent. It would be remarkable should insulin, with its specific function in carbohydrate metabolism, be able also to influence directly the metabolism of alcohol; more likely seems the possibility that the effect of insulin on carbohydrate metabolism secondarily influences the rate of burning of alcohol. A link between the metabolism of these two substances has been found *in vitro*. Thus it has been shown that there is a coupled oxidation-reduction reaction involving alcohol and pyruvate, which is a known link in the metabolism of carbohydrate. In this reaction the oxidation of alcohol to acetaldehyde is accomplished while pyruvate is reduced to lactate. That this reaction takes place *in vivo*, and may be important in the metabolism of alcohol, is indicated by the fact that in the intact animal the rate of alcohol combustion is accelerated by administration of pyruvate. Further work in this direction may solve the problem as to whether the energy derived from alcohol may be stored or utilized for any other purpose than the production of heat.

One can no longer provoke an argument as to whether alcohol is a stimulant or a depressant; all the data at hand indicate that from the outset the effect of alcohol on the nervous system is that of depression. The apparent stimulation seen in social drinking is customarily explained as being due to

removal of inhibitions, a commodity with which civilized man seems to be richly endowed. Sufficiently delicate tests of neuromuscular coordination, which is early affected by alcohol, show at no time a facilitation of performance, while even quite low concentrations of alcohol in the brain result in decreased skill. It has been found in man, however, that rather than a gradual deterioration in performance as alcohol concentration rises, there is relatively little effect until a level is reached, characteristic of the individual, at which a rapid drop in skill occurs. This "critical level" of brain and (as a reflection thereof) blood alcohol is peculiarly resistant to change in a given individual, but varies widely from one individual to another, a fact which rather decreases the usefulness of the determination of blood alcohol concentration in the legal diagnosis of drunkenness. In dogs the level may be raised considerably by habituation to alcohol over an extended period, and it seems probable that this takes place in man as well, although controlled experiments of this nature are not practicable in human subjects. It is also probable, although again no direct evidence for this exists, that a decrease in tolerance may take place with age, after prolonged alcoholic excess, in organic disease of the nervous system as after head trauma, and so on.

The "critical level" varies but little with the test of nervous function used. Thus quite similar levels for a given individual were found with a variety of devices designed to assess neuromuscular coordination, while at the same blood alcohol level ataxia, as evidenced by inability to balance on one foot with closed eyes, became apparent, and the subjects tended to fall asleep if undisturbed. Nausea and vomiting, if it occurred during the experiment, took place at this same level. Thus we have objective evidence that the traditional statement that "it was the last drink that did it" is based on valid observations.

Much work remains to be done before our knowledge of alcohol approaches that of a great many substances with which man has immeasurably less contact. It is to be hoped that this work will not be impeded by reluctance of workers to enter a field in which prejudice and moral issues have played so great a part in the past.

Not By the Back Door

The Council of the California Medical Association served emphatic notice at the year-end that rebating practices must be stopped. The Council went one step further in giving the story to the press, so that the public, as well as Association members, might know that it meant business.

This step may be considered an outgrowth of the Council's continuing study of the individual physician-patient relationship. Here is one place where the individual physician and the profession as a whole may improve the public relations of medicine by deleting a snide practice which can have no ultimate effect other than to increase the cost of medical care to the public.

With the tremendous increase of both the general and the medical population of California in the past few years it is not surprising that some injudicious practices have come into the state. Policies which may be condoned elsewhere may be put into effect here by unthinking practitioners. The Council's statement is intended to serve notice that the ground rules in California are different.

Complaints of rebating have recently centered on prescriptions for eyeglasses. The story is that the doctor refers his patient to a specified optical company, which in turn rebates to the doctor 40 per cent—possibly more—of the charge to the patient. This is an old story; it has been heard for years, not only here but elsewhere. And it has grown to be an accepted situation in some places for a reason that is difficult to understand. To get behind the facts, a look at the national picture of spectacle prescriptions may help.

About a year ago the Department of Justice issued indictments against several manufacturing companies, their officers and a large number of physicians, charging that these physicians were accepting rebates on the eyeglasses made up by these companies or their agents on the prescriptions of the doctors. When the attention of organized medicine was brought to this situation, the explanation was given that the doctors could not help themselves, that the system was so well entrenched it could not be rooted out. And the reason for the firm entrenchment was that the optometrists, who reportedly prescribe and furnish some 85 per cent of the eyeglasses sold in this country, must be protected by a margin of profit large enough to permit them to carry on their practices. If the spectacles sold to the patient of a physician were sold at half the price the optometrist charged, the optometrist would be placed at a commercial disadvantage.

If we follow this story to its inevitable conclusion it is apparent that the physicians who accept rebates

from the optical companies are lending their weight to support optometry. If the doctors insisted that the rebate be taken off the price of the glasses before they were delivered to the patient, the cost of medical care to the public would be correspondingly reduced. Of course, a really conscientious doctor could take the rebate and apply it as a credit on his own statement to the patient for the examination and refraction.

Although complaints at present are principally against rebates in the eyeglasses field, other practices just as insidious are appearing in some places. Consider the x-ray or pathological laboratory that returns a part of its charges to the referring physician. Or the artificial limb manufacturer whose price to his customer includes a share for the doctor. Any way you look at it, the participating producers and doctors are trafficking in human misery and bringing ill repute to the entire system of medical care. Between them they are raising prices to a public which has no recourse other than the protection offered by the Department of Justice and a few civic organizations which make it their business to detect and stop such injustices.

Fortunately, the percentage of doctors who engage in such nefarious practices is small. But, like the rotten apple, they contaminate the entire profession, in the public if not the ethical eye. To clean out a barrel of rotten apples, all must be carefully examined, the bad ones thrown out and the good ones retained. If the medical profession needs such a culling, it is high time to undertake it. The county medical societies, which are authorized to institute disciplinary proceedings against their erring members, have been urged by the CMA Council to take action where it is warranted. The profession has been notified that such practices must stop. The public has been told that the association means business.

The Council's statement repeats a truism which every doctor knows but which some have apparently forgotten, namely, "an ethical doctor bills his patients directly for his services and cannot receive other recompense under any guise whatever." The doctor who takes rebates, under any guise or dodge, is violating the ethics of the profession and must be called to account. Let him earn his livelihood through the honest practice of his profession and not by the back door route.

CLINICAL CONFERENCE

FROM THE STANFORD UNIVERSITY SCHOOL OF MEDICINE POSTGRADUATE REVIEW COURSE, SEPTEMBER 8, 1947

CASE PRESENTATION, W. G. SNOW, M.D.*: The patient, a 25-year-old white male clerk, was perfectly well and an active participant in sports until a year ago. At that time he began to have a dull ache in the lower back which awakened him early in the morning and disappeared with activity during the day. Soon he became conscious of discomfort in the back when riding busses or streetcars.

About six months ago he began to have pain also in the chest which has gradually increased in severity and is aggravated by sneezing or coughing. Stiffness has developed in the lower back, and now attempts to flex the back are painful. He has noticed gradually increasing fatigue for two months. Sleep is disturbed at night, the patient being awakened by chest pains when he turns from side to side. He is unable to walk as briskly as before and any jar gives rise to pain in the back. There are no gastro-intestinal symptoms or symptoms of other system disturbances.

Physical examination shows a fairly well nourished young man, who steps cautiously and has a stiff gait. He holds the back rigid. The thoracic cage shows diminished expansion, the normal lordotic lumbar curve is obliterated, the erector spinal muscles are very spastic, and flexion of the trunk is largely accomplished at the hips without participation by the lower back. There is tenderness over the lumbar spines and sacro-iliac joints. Examination of the cardiovascular and respiratory systems discloses no abnormality. The abdomen shows no disease.

Laboratory studies contribute only an elevation of leukocytes to 10,000 with 77 per cent neutrophiles, of which 68 are lobulated and nine are band forms. The sedimentation rate is elevated to 27 mm. in one hour by the Wintrobe method.

ROLAND DAVISON, M.D.†: The story and findings are strongly suggestive of early ankylosing spondylarthritis, which is sometimes called rheumatoid spondylitis and in the older literature is known as Marie-Strumpell disease, after the two great clinicians who wrote about it the latter part of the 19th century. Spondylitis, spondylarthritis ankylopoietica, spondylitis ossificans ligamentosa, spondylitis rhizomalique and Bechterew's disease are other names for the same disease.

I make a presumptive diagnosis in this patient because of the patient's age and sex as much as by the history and physical findings, for spondylarthritis attacks particularly young males. The late Gilbert Scott for that reason preferred to call the disease adolescent spondylitis. Buckley in 1931 reported a series of these cases, in which most of the patients were between the ages of 20 and 40, and other authors confirm this incidence. Ninety per cent of the reported cases are observed in males whether they are seen in England, in Holland or in Boston. The only exception is the series reported by Oppenheimer from Beirut, Syria, in which 24 per cent were females. The symptoms are quite typical, although some patients have little back pain and present bizarre clinical syndromes. One patient recently complained only of a painful ankle, and only when tenderness was found over one sacro-iliac point and stiffness in the lower back did the real cause of the symptoms appear. The chest pain which becomes agonizing with coughing or sneezing is particularly significant.

Early diagnosis is important if we are to prevent the end results of this disease with which I am sure you are all familiar—a dejected individual, emaciated, unable to turn his head, which protrudes forward, the chest sunken and immobile, the back arched in great kyphos, the slow walk which is little more than shuffling. The disease may be rapidly progressive, leading to ankylosis of the entire spine in the course of months, or, more commonly, there may be slow progression over a period of ten to fifteen years. Periods of quiescence with only mild symptoms are not uncommon. As the disease progresses, the back becomes increasingly stiff, pains and discomfort become more severe, kyphosis develops, the thorax becomes fixed, reducing the patient's vital capacity. Anorexia ensues. Muscle atrophy, anemia, and great mental depression are observed.

In contradistinction to ordinary rheumatoid arthritis, the small joints are not involved, though frequently the shoulders and hip joints take part in the process.

In the more acute cases there is low grade fever, and most show elevated erythrocyte sedimentation rates, though rarely is the sedimentation as high as that we observe in well developed atrophic arthritis.

Perhaps we should find out whether this young man has evidence of spondylarthritis before we go on. What do the roentgenograms show?

DR. SNOW: The roentgenograms show spotty decalcification, haziness and some sclerosis of the sacro-iliac joints; the apophyseal articulations in the lumbar spine have indistinct outlines; the joint space is clouded and narrowed.

DR. DAVISON: That clinches the diagnosis: those

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findings are typical of early spondylarthritis of the ankylosing type.

While we know nothing concerning the etiology of the disease, we do know the essential lesion is a synovitis of the sacro-iliac, apophyseal and costovertebral articulations. These are all true joints lined with synovia, and, of course, the apophyseals are the only true joints of the spine.

Most writers on this subject believe the sacro-iliac joints are the first involved but multiple joints are affected simultaneously. There is no certain progression from sacro-iliacs to lumbar, then thoracic and finally the cervicals. Isolated segments of the spine are often actively diseased at the same time. For example, a few apophyseal joints in the lumbar spine may be affected along with some in the thoracic or cervical regions.

In the early stages synovitis occurs with exudation into the joint, the articular cartilage is invaded by round cells and becomes roughened. As the disease progresses the articular cartilage disappears and is replaced by connective tissue; the joint ankyloses. Atrophy of the bodies of the vertebrae, and calcification of the lateral and longitudinal ligaments occurs late in the disease. The process goes on to complete rigidity of the entire spine.

The roentgen findings demonstrate what has gone on pathologically, and we must lean on the roentgenologist for our diagnosis. Any young adult or adolescent who complains of backache which persists should have the advantage the roentgen ray offers in the diagnosis of spondylarthritis. In making the roentgenograms, positioning is very important. The anteroposterior exposure is a poor one for demonstrating the apophyseal joints. Different positions must be used, depending on the region we wish to depict.

In the cervical region the facets stand at right angles to the median plane of the body. Therefore, the lateral projection demonstrates these joints best in that region. In the thoracic spine the facets are rotated forward to an angle of 70 degrees with the median plane. To show the left dorsal facets, the patient is posed with his left side against the film and the body rotated forward so the right breast is raised to an angle of 70 degrees. With a little more rotation the right facets are delineated. The apophyseal joints of the lumbar spine are usually at an angle of 45 degrees with the median plane and the semilateral position is used for either side. The sacro-iliac joints may demonstrate changes when the film is made in the anteroposterior position; the 30 degree cephalad position gives better results.

Spondylarthritis produces roentgen changes in the sacro-iliac joints which first show irregular decalcification and trabeculation in the bones adjacent to the joint, haziness and what appears to be widening of the joint. As the disease progresses, coincident with cartilage destruction, sclerosis of the subchondreal bone, and narrowing of the joint space is seen; finally there is complete obliteration of the joint by ankylosis. The findings in the apophyseal joints are similar: first, diffuse rarefaction, indistinct hazy outlines, narrowing, and finally obliteration. Atrophy of the vertebrae bodies occurs late. Calcification of ligaments is seen only in advanced disease and may be absent in a fully rigid spine.

The treatment of these patients has changed materially in the past few years. Not long ago, these patients were told we could do nothing. Loring Swaim and others helped by putting the patient to bed in body casts, by packs and fomentations, and braces to prevent extreme kyphosis when the patients became ambulant. For the anemia which invariably develops in the advanced cases, transfusion was and is the treatment of choice. Liver extract and iron are of little if any value. Gold salts are utterly useless in this disease; the salicylates are of value only for relief of pain.

Roentgenotherapy is the treatment which appears to do most good. Its value is greatest in the early case, but even advanced cases having much ankylosis obtain relief of pain and spasm from it. Roentgenotherapy also appears to have the effect of allaying the inflammation underlying the symptoms and of arresting the progress of the disease. Well controlled series show subjective improvement in 90 to 100 per cent of the cases, and 80 per cent show objective improvement.

The technic of treatment, the size of the portals and dosage, varies considerably from clinic to clinic. In England, the wide field technic proposed by Scott in 1935 using a special tube prevails. Freyberg in 1940 recommended single treatment of 200 r. In 1946 he advised 150 r. In this clinic, we advise roentgenotherapy as soon as the diagnosis is made. Regardless of the extent of the disease, the entire spine is treated. Six treatments are given at daily intervals, alternating area 1, which includes the cervical and thoracic spine, and area 2 which comprises the lumbar region and the sacro-iliac joints. At each treatment 150 r. is given. The factors are 200 K.V., target skin distance 70 cm., 1 mm. cu. filter, giving one-half value layer. The total dosage for the course 900 r. measured in air. Pyribenzamine 50 mg. three times daily is given to offset the radiation sickness which most patients otherwise encounter.

At the end of one month, a second course of roentgenotherapy is given and in three months a third course. Subsequent treatment is given as indicated; the patients report every three months for observation. Just as soon as pain and spasm are alleviated, corrective exercises are given in the physical therapy department. These exercises are aimed toward mobilization of thorax and muscles and correction of posture.

The outlook of both the doctor and patient has been brightened by the use of roentgenotherapy in the treatment of spondylarthritis — indeed has changed from despair to hope. Complete relief of symptoms is the rule soon after completion of the second course of treatment.

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NOTICES AND REPORTS

C. M. A. POSITION ON REBATING

The following resolution was adopted by the Council of the California Medical Association, December 21, 1947.

"In its continued efforts to protect the public the California Medical Association serves emphatic notice that it is both unjust and a violation of medical ethics for doctors to receive rebates of any portion of fees or costs of medical appliances, drugs, eye-glasses, x-ray or laboratory procedures which have been prescribed or recommended by them. It is equally unethical for physicians to give or to participate in rebates of fees.

"The California Medical Association has received reliable reports that rebating practices still exist among some unethical physicians who constitute a small percentage of the profession.

"This statement is made for the information of all groups and individuals interested in public welfare in our campaign to eliminate this abuse and to enforce the honest practice of medicine.

"The public should be advised that an ethical doctor bills his patients directly for his services and cannot receive other recompense under any guise whatever.

"The Council of the California Medical Association has addressed a letter to each of the forty component county medical societies calling this situation to its attention and requesting that the county societies take appropriate disciplinary action in the instance of any violation of this principle."

Council Meeting Minutes

Tentative Draft: Minutes of the 347th Meeting of the Council of the California Medical Association, San Francisco, December 20-21, 1947.

The meeting was called to order by Vice-Chairman Sidney J. Shipman at 10 a.m., Saturday, December 20, 1947, in the St. Francis Hotel, San Francisco.

1. *Roll Call:*

Present were President Cline, President-Elect Askey, Speaker Alesen, Vice-Speaker Charnock, Councilors Shipman, Ball, Crane, Henderson, Anderson, Lum, MacDonald, Green, Cherry, MacLean, Bailey and Thompson, Secretary-Treasurer Garland, and Editor Wilbur. Absent, Councilors Bruck (illness), Kneeshaw and Hoffman.

Present by invitation were Doctor Dwight H. Murray, Chairman of the Committee on Public Policy and Legislation; Doctor C. L. Cooley, Secretary of California Physicians' Service; Mr. John Hunton, Executive Secretary; Mr. Ben Read, Executive Secretary of the Public Health League of California; Mr. Howard Hassard, Legal Counsel; Mr. Clem Whitaker, public relations counsel; Mr. William M. Bowman, Executive Director of California Physicians' Service; Mr. Herbert A. Dady, Advertising Manager of CALIFORNIA MEDICINE; and county executive secretaries Rollen Waterson of Alameda County, Frank H. Kihm of San Francisco County, Kenneth Young of San Diego County and Joe Donovan of Santa Clara County.

A quorum was declared present and acting.

2. *Approval of Minutes:*

(a) On motion duly made and seconded, the minutes of the 346th Council meeting, held September 20-21, 1947, were approved.

(b) On motion duly made and seconded, the minutes of the 205th Executive Committee meeting, held November 9, 1947, were approved.

3. *Membership:*

(a) A report of membership as of December 19, 1947, was received, showing 8,916 members. Attention was called to the fact that at the approach of

the year-end, there were only 25 members who had resigned during 1947 and only 12 members who had not paid their 1947 dues. The total of these two amounts to *less than four-tenths of one per cent* of the Association's membership.

(b) On motion duly made and seconded, 90 members whose 1947 dues had been paid since September 20, 1947, were reinstated to active membership.

(c) On motion duly made and seconded, Doctor Lorruli A. Rethwilm of San Francisco was reinstated as a 1946 member on payment of her dues for that year.

(d) On nomination by their respective county societies, five members were elected to associate membership. These were: Philip K. Condit, Alameda County; Warren F. Fox, Riverside County; Harold Marks, San Mateo County; Joseph A. Sampson, Santa Clara County; and James J. Hamilton, Yuba-Sutter-Colusa County.

(e) On nomination by their respective county societies. 16 members were elected to retired membership. These were: William Earl Mitchell, Leslie T. Peery, Clarence Alfred Wills, Alameda County; Charles W. Decker, John Dunlop, Harry J. Mayer, Herbert V. Mellinger, Eleanor Seymour, A. A. Sornsen, Carl S. J. Tillmanns, Los Angeles County; Herbert A. Johnston, Orange County; Samuel A. Durr, San Diego County; Herbert W. Allen, Lorruli Rethwilm, San Francisco County; A. L. Van Meter, San Joaquin County, and Oscar Coodley, Los Angeles County.

(f) On nomination by their respective county societies or on direct application, as provided by the Constitution, 15 members were elected to Life Membership. There was discussion of the apparent advantage being taken of existing constitutional provisions by some physicians who might reasonably be expected to maintain regular active membership in the Association. Those elected were: C. L. Abbott, E. N. Ewer, Ergo Majors, George G. Reinle, Alameda County; Guy Manson, Fresno County; John V. Barrow, Edgerton L. Crispin, W. H. Kiger, George H. Kress, Tilman H. McLaughlin, Ross Moore, Frank W. Otto, Walter Wessels, E. H. Wiley, and Harold R. Witherbee, Los Angeles County.

4. *Financial:*

(a) A report of bank balances as of December 19, 1947, was received.

(b) A balance sheet of the C.M.A. and the Trustees of the C.M.A., combined, as of November 30, 1947, was received.

(e) A report of income and expenditure for November and the five months ended November 30, 1947, was received.

At this point the Council recessed to permit a meeting of the Trustees of the California Medical Association. Upon completion of the meeting of the Trustees the Council reconvened.

5. *Reports of Committees:*

(a) Committee on Scientific Work—Doctor L. H. Garland, chairman, reported on arrangements being made for the 1948 Annual Session. There will be six guest speakers, one invited by the President, one each by the Sections on Gencral Medicine, General Surgery, Anesthesiology and Dermatology and Syphilology together with Doctor George F. Lull, Secretary and General Manager of the A.M.A. Doctor Garland asked the Council to approve the inclusion in the program of several California physicians who are not members of the Association, subject to final approval by the Committee on Scientific Work. Most of these men are in full-time research or junior teaching positions. This approval was given.

(b) Committee on Medical Economics—Doctor H. Gordon MacLean, chairman, reported on meetings held by the Committee in compliance with Council and House of Delegates instructions, in studying prepayment medical care plans and individual physician-patient relationships. Studies of the latter are now being made from the records of the Bureaus of Medical Economics in Alameda, San Francisco and Santa Clara Counties and by committees on medical defense, fee complaints and professional conduct of the Los Angeles County Medical Association. The committee has interviewed directors of various prepayment plans and has planned additional interviews at the Cleveland A.M.A. meeting in January, 1948. A preliminary report will be made in the Pre-Convention Bulletin and a final report at the 1948 Annual Session. Doctor MacLean read a covering letter and questionnaire which the committee has tentatively proposed sending to medical societies, hospital directors and general practice groups, to ascertain the average reception by these groups of various forms of voluntary sickness care insurance and related items. On motion duly made and seconded, the Council approved this mailing.

(c) Committee on Rural Medical Service—Doctor Cline reported on a Rural Health Conference held in Sacramento on December 6 under the sponsorship of the Committee and participated in by the major farm groups, nursing association, California Congress of Parents and Teachers, State Department of Public Health, county health officers and others. He stated there was great interest shown by all present in the problems of rural medical care and satisfaction that the C.M.A. was taking leadership in this matter. The farm groups were particularly strong in their rejection of compulsory health insurance as a solution of medical care problems.

Doctor Cline brought up for discussion a reimbursement type of health and accident policy underwritten by Lloyd's of London which he had mentioned in his address at this conference and which had created considerable interest. The Committee on Medical Economics undertook to investigate this type of policy as a part of its studies.

(d) Committee on Postgraduate Activities—The secretary reported for Dr. J. C. Ruddock, chairman, that the committee, in line with previous Council authorization, had selected Doctor Carroll B. Andrews of Sonoma as director of the committee's projected program, at a salary of $500 part-time. The committee proposes that Doctor Andrews start

work January 1, 1948, and spend some weeks at the outset in studying postgraduate programs in several eastern states as well as actual needs in our own state counties. Thereafter he would attempt to correlate the postgraduate programs now offered by medical schools and others and to establish a uniform program for the C.M.A. On motion duly made and seconded, it was voted to appropriate a maximum of $5,000 for traveling and other expenses of this program, in addition to the appropriation previously authorized for salaries, and to approve the contract for employment drawn up by legal counsel.

(e) Advisory Planning Committee—Mr. Hunton, chairman, reported on two meetings of the committee since the last Council meeting. One of these was with the standing Committee on Medical Economics, which has requested the Advisory Planning Committee to cooperate with it. The Advisory Planning Committee had decided, pending Council approval, that its meetings should be held at approximately the same intervals as Council meetings, unless there is special business to require more frequent meetings; the Committee believes such meetings would constitute substantial compliance with the original House of Delegates resolution which provided for monthly meetings. The Council approved this suggestion. The Committee also requested that Mr. Vance V. Venables, Executive Secretary of the Kern County Medical Society, be appointed to the Committee and the Council so voted.

6. *Proposed Resolution on Private Enterprise:*

Doctor Askey introduced a Mr. Stone, who addressed the Council on behalf of the Committee for Economic Freedom of Van Nuys; Mr. Stone requested the Council to consider joining the program of this organization in fostering a request to the Congress to inaugurate a constitutional amendment to provide that the Federal Government should not enter into any business in competition with its citizens. After discussion, it was regularly moved, seconded and voted that this proposal be given to public relations counsel who was instructed to aid this movement if possible, and to Doctor Dwight H. Murray for any assistance he might give it in the A.M.A.

7. *California Physicians' Service:*

Doctor C. L. Cooley, C.P.S. Secretary, reported that C.P.S. is today in the best condition in its history, has reduced its stabilization fund deficit to $175,070 and has tightened up on its underwriting and administrative procedures in order to make a more economical operation. Participation of 75 per cent of the members of new groups is being required, instead of the former 50 per cent; waiting periods are required for some common procedures, and other requirements have been instituted to eliminate abuses and still give the members a proper and adequate service.

Mr. W. L. Bowman, Executive Director of C.P.S., reviewed the income statement for eight months ended November 30, 1947, pointed out that administrative expenses are now running 16 per cent and showed that the average payment to physicians, including both the commercial and veterans' programs, is now $2.15 a unit. He stated that the Trustees hope to increase the commercial program unit payment within the next few months and to bring it to a full $2.50 before the close of 1948. Some of the more favorable experience he ascribed to a "seasoning" of membership groups, pointing to a greater use of service in the early months of membership which tapers off as a member continues for a longer period of time. On motion duly made and seconded, it was voted to accept this report with thanks.

On motion duly made and seconded, it was voted to secure for each Councilor a copy of a report recently released by the U. S. Public Health Service on the matter of medical cost prepayment and Blue Cross plans.

On motion duly made and seconded, it was voted to continue as an active committee the C.P.S. fee schedule committee appointed last year by the Council under the chairmanship of Doctor William L. Bender of San Francisco and to renew its thanks to this committee for the work it has already performed.

8. *Executive Session:*

At this point it was moved, seconded and unanimously voted to go into executive session.

Doctor Cline brought up some questions relative to the recent matter in the Los Angeles County Medical Association area and quoted from some campaign literature which included various statements at variance with known facts. He asked if the Council should take official cognizance of such material. There was considerable discussion, which led into the question of rebates on eye-glasses, drugs, appliances and other materials. On motion duly made and seconded, it was voted to refer this matter to a special committee which would report back on Sunday, December 21.

Sunday, December 21:

The special committee reported it recommended the Council should reaffirm its earlier stand against rebates in any form and offered a statement to that effect. It had also prepared a series of nine procedural steps to make this statement effective. On motions duly made and seconded, the Council voted unanimously to adopt this statement and the nine procedural steps to implement it. Copies of both items are to be made a part of these minutes.

Statement adopted by the Council of the C.M.A., December 21, 1947:

"In its continued efforts to protect the public the California Medical Association serves emphatic notice that it is both unjust and a violation of medical ethics for doctors to receive rebates of any portion of fees or cost of medical appliances, drugs, eyeglasses, x-ray or laboratory procedures which have been prescribed or recommended by them. It is equally unethical for physicians to give or to participate in rebates of fees.

"The California Medical Association has received reliable reports that rebating practices still exist among some unethical physicians who constitute a small percentage of the profession.

"This statement is made for the information of all groups and individuals interested in public welfare in our campaign to eliminate this abuse and to enforce the honest practice of medicine.

"The public should be advised that an ethical doctor bills his patients directly for his services and cannot receive other recompense under any guise whatever.

"The Council of the California Medical Association has addressed a letter to each of the forty component county medical societies calling this situation to its attention and requesting that the county societies take appropriate disciplinary action in the instance of any violation of this principle."

Steps to implement statement adopted December 21, 1947:

1. Write letter to County Societies; 2. Publish Council action in *California Medicine* and *Public Relation News;* 3. Issue appropriate press release; 4. Send copies to the Better Business Bureaus of the State; 5. Request Councillors to inform Societies in their districts; 6. Forward copies to the A.M.A.; 7. Ask A.M.A. House of Delegates to take similar action; 8. Refer resolution to C.M.A. House of Delegates as recommendation of Council. 9. Transmit informative letter to each member of C.M.A.

9. *Rise From Executive Session:*

At this point it was moved, seconded and voted that the Council rise from executive session.

10. *Public Policy and Legislation:*

Mr. Ben Read reviewed the results of special elections held in two Senate and five Assembly districts and pointed out that in practically all cases the winning candidate was regarded as friendly to the policies of medicine.

Doctor Dwight H. Murray, chairman of Public Policy and Legislation, commented on the nursing situation and suggested that a committee be appointed to meet with similar committees of the State Board of Medical Examiners, California State Nurses' Association and Association of California Hospitals to try to work out legislation to clarify misunderstandings in the nursing field. It was regularly moved, seconded and voted to appoint such a committee.

Doctor Murray also suggested that several sections (249-250-251) of the Crippled Children's Act be investigated as to their effect on the practice of medicine. He also stated that several sections of the optometry act should be looked into for possible clarification.

In regard to the coroner system of the state, a complete revamping of which was ordered by the 1947 House of Delegates, Doctor Murray pointed to the difficulties of such a procedure and asked that the Council include a report on this in its annual report.

11. *Public Relations:*

Mr. Clem Whitaker, public relations counsel reported that only ten counties remained for Voluntary Health Insurance weeks and proposed that the campaign in Los Angeles County be temporarily deferred because of the difficulties of size which this great county offered and that the others be completed in the early months of 1948. He suggested that this phase of the public relations campaign be rapidly tapered off and that the fee of his organization be reduced in 1948 from $1,500 to $1,000 in view of the decreased demands for attention.

In regard to "California Caravan," the C.M.A. radio program, Mr. Whitaker stated that the California Congress of Parents and Teachers had awarded its Achievement Award to this program for its excellence as an educational medium. He also stated that the Los Angeles County School Board has nominated this program for the Peabody Award for educational programs, a national award comparable to the Pulitzer Prizes offered in journalism and related fields.

12. *New Mexico Physicians' Service:*

Mr. Hunton reported that the latest financial statement of New Mexico Physicians' Service showed that for 21 months of operation a net deficit of only $905 had been incurred. He also reported that NMPS has formed its own hospitalization affiliate, has been forced to discontinue joint operations with the Blue Cross plan in New Mexico and in the first two months of its own plan has attained a membership of more than 6,000, compared with a Blue Cross membership of about 11,000 prior to the termination of joint operations.

13. *California Medicine:*

Mr. Hunton reported that CALIFORNIA MEDICINE had withdrawn from the Cooperative Medical Advertising Bureau, as authorized by the Council, and was now engaged in selling its advertising space direct. He introduced Mr. Herbert A. Dady, advertising manager, who accompanied Mr. Hunton on a trip east to visit the major advertising agencies. Business prospects for 1948 are good, he reported, with some new business being secured to offset losses coming from other accounts under a postwar retrenchment program. The reception of CALIFORNIA MEDICINE by the advertising agencies was excellent. Advertising of products not accepted by the Council on Pharmacy and Chemistry of the A.M.A. is under control of an advertising committee under the chairmanship of Doctor Hamilton Anderson and including Doctors Matthew Hosmer, C. L. Cooley, Nelson Howard and Walter Beckh.

Mr. Hunton also reported a vacancy on the Editorial Board in the disqualification of Doctor Windsor Cutting, who is no longer an Association member. It was regularly moved, seconded and voted that Doctor Hamilton Anderson be appointed to this position.

14. *Recess:*

At this point the Council voted to recess until 10 a.m., December 21.

15. *Reconvention:*

The Council reconvened at 10 a.m., Sunday, December 21, 1947, under the chairmanship of Doctor Edwin L. Bruck.

16. *Roll Call:*

Present were President Cline, President-Elect Askey, Speaker Alesen, Vice-Speaker Charnock, Councilors Bruck, Shipman, Ball, Crane, Henderson, Anderson, Lum, MacDonald, Green, Cherry, MacLean, Bailey, and Thompson, Secretary-Treasurer Garland and Editor Wilbur.

Present by invitation were Doctor Dwight H. Murray, Doctor Wilton L. Halverson, State Director of Public Health, and Doctors Robertson Ward and Donald Cass. Delegates to the A.M.A.; Messrs. Hunton, Read, Hassard, Waterson, Kihm, Whitaker and Bowman. Absent, Councilors Kneeshaw and Hoffman.

A quorum was declared present and acting.

17. *Legal Department:*

(a) Mr. Hassard reported that the state Attorney General had issued a new opinion relative to county hospitals, under which he held that the hospitals were authorized to establish reasonable regulations for admission to the professional staff. This overrules a previous opinion.

(b) Mr. Hassard reported on the decisions of a statewide committee on hospitalization of the California State Chamber of Commerce on which Messrs. Hassard, Read and Hunton were members. This committee has recommended that additional hospital beds should be provided by popular subscription or other private means, if available, and that federal or state funds should be used only if other revenue sources fail. This recommendation is now before the Chamber's statewide tax committee prior to presentation to the State Chamber for adoption as a policy.

(c) Mr. Hassard stated that, following requests from medical school deans and members of the State Board of Medical Examiners, a complete revision of the Medical Practice Act was under consideration. Various suggestions have been offered for rewriting this code and a State Senate interim committee, headed by Senator Burns of Fresno, is looking over this section of the state laws along with other sections dealing with all agencies under the Department of Professional and Vocational Standards. On motion duly made and seconded, it was voted to appoint a special committee to meet with other interested parties to help draft a new code section. The chairman appointed D. H. Murray as chairman and Donald Charnock and Dwight Wilbur as members of this committee.

(d) Mr. Hassard also stated that he had been appointed a commissioner and legal counsel for Associated Medical Care Plans and had attended a meeting in Chicago on December 13. A.M.C.P. was established in 1945 by the A.M.A. as a membership organization for doctor-sponsored medical care prepayment plans and now has 42 member plans. At the Chicago meeting there was discussion of forming a nationwide insurance company to operate through the member plans in all states. This was not favorably voted but it was agreed to apply for federal registration of the Blue Shield insignia which has been used by medically-sponsored pre-payment plans for 20 years and which has come to mean medical sponsorship of such plans.

18. *Delegates to American Medical Association:*

Doctor Cline reported that two alternates to the A.M.A. from California had been declared ineligible because they had not been Fellows of the A.M.A. for two years preceding their election. On motion duly made and seconded, it was voted to elect Doctor Frank A. MacDonald as alternate to Doctor John W. Green.

On motion duly made and seconded, it was voted to elect Doctor Carl L. Mulfinger as alternate to Doctor Donald Cass.

19. *California Representative to County Society Secretaries' Conference:*

The Secretary brought up the request of the A.M.A. to name a California representative to the committee arranging the County Society Secretaries' ("Grass Roots") Conference, which will meet in Cleveland on January 4, 1948. On motion duly made and seconded, it was voted to name Doctor Carl L. Mulfinger of Los Angeles to this post.

20. *State Department of Public Health:*

Doctor Wilton L. Halverson, State Director of Public Health, told the Council that on December 19 the Department had adopted a new set of standards for so-called "schools" for the physically handicapped. These standards are expected to result in improved conditions for the physically handicapped who attend such institutions.

Doctor Halverson also stated that amended qualifications for laboratory technologists had been adopted, as previously reported to the Council.

Relative to the Department's chronic disease program, Doctor Halverson reported that advisory committees of physicians, farmers and others had been established to aid the Department. Regarding chronic diseases, Doctor Halverson stated the Department had no preconceived ideas; the Department is interested in cancer registries and wishes to explore improved methods of medical care.

21. *Palo Alto Clinic:*

The Chairman reported that the information sought by the Council in relation to the freedom of choice of physicians by Stanford University students had been received from the university. There was no further discussion.

22. *Physicians' Benevolence Fund:*

Doctor Axcel E. Anderson read the draft of a letter he proposed to send as Chairman of the C.M.A. Benevolence Committee to the Los Angeles County Physicians' Aid Association to ascertain the policies of the latter organization in regard to permitting needy physicians from other counties to be cared for at the home which the L.A.C.P.A.S. plans to build. The Council voted that such a letter be sent.

23. *Rebates:*

On motion duly made and seconded, it was voted that a special committee of the Council (see Item 8) delineate those practices which are considered unethical in the matter of rebating of fees or charges, such list to be publicized in CALIFORNIA MEDICINE.

24. *Medical Society of the State of California:*

Doctor Cline reported a complaint that the C.M.A. mailing list had been denied for use by the Medical Society of California. The correspondence was reviewed, showing that such a request had not been made. It was ordered that copies of this correspondence be forwarded to the physician who made the complaint. It was regularly moved, seconded and voted that the minutes of the Executive Committee concerning the Medical Society of the State of California be reviewed and brought to the attention of the members of the Council.

25. *C.M.A. Mailing List:*

A request for the use of the C.M.A. mailing list to publicize a new book was discussed and it was agreed that such request constituted a commercial enterprise and therefore was not acceptable. On motion duly made and seconded, it was voted that the mailing list be not available for any commercial enterprise.

26. *Blood Banks:*

The Chairman reviewed the blood bank situation and suggested that a resolution be introduced into the A.M.A. House of Delegates to request a reconsideration of the approval given the American National Red Cross blood bank program in June, 1947. Upon motion duly made and seconded, it was voted that the sense of this resolution be acted upon by the C.M.A. Delegates to the A.M.A. at the January, 1948, meeting. The resolution follows:

WHEREAS, The procurement and distribution of human blood in time of peace is a matter for joint cooperation between the medical profession and the appropriate private or commercial laboratories, and

WHEREAS, Many Medical Associations have already set up and are successfully conducting nonprofit Blood Banks, and

WHEREAS, The operation of a national Blood Bank program by one voluntary but quasi-governmental agency may be regarded as a further step toward socialized medicine (under agency rather than direct governmental control) and may be the precedent for programs for the free distribution of penicillin, streptomycin and other therapeutic or diagnostic agents: now, therefore, be it

Resolved, That this House of Delegates does not regard it as a proper function of the American Red Cross to engage in a Blood Bank Program in the United States in time of peace, and be it further

Resolved, That this resolution rescinds the former "Approval in Principle" granted to the so-called Red Cross Blood Program by this house.

27. *Santa Fe Railroad Physicians:*

A letter from physicians of the Santa Fe Railroad coast lines was read, in which the Council was requested to review the by-laws of a collective bargaining organization by these physicians. After discussion it was regularly moved, seconded and voted that legal counsel prepare a letter to this organization, stating that to the best of the Council's knowledge no penalty would be attached to a physician's membership in such a group so long as the group was not engaged in any professionally unethical activities and that no known section of the Principles of Medical Ethics would prohibit the formation of such a group. It was voted to give this matter further consideration at the next Council meeting, and it was voted to appoint a special committee to investigate the matter meanwhile. This committee was named as E. V. Askey, chairman; Wilbur Bailey and L. A. Alesen.

28. *State Board of Medical Examiners—E. D. Kilbourne, Sr., J. D.:*

A letter was read from Doctor E. D. Kilbourne, Sr., whose name was omitted from the directory of the State Board of Medical Examiners due to a confusion of his name with that of his son, E. D. Kilbourne, Jr., M.D. It was voted to refer this matter to the State Board of Medical Examiners.

29. *Request for Ruling on Ethics:*

A letter was read in which the Council was requested to rule on the ethics of a letter sent to former diabetic patients of a medical group asking donations for research work on diabetes. Inasmuch as any disciplinary proceedings in such a case would have to originate at the county level, it was regularly moved, seconded and voted that the matter be referred to the county medical society for determination.

30. *Request for Council Approval of New Publication:*

A request that the Council appoint a member as chairman of a special committee to prepare a manual for disability rating of cases of joint disorders was considered, said manual to be published on completion. It was regularly moved, seconded and voted that the Council could not authorize a program involving an uncompleted text of this type.

31. *Time and Place of Next Meeting:*

It was agreed that the next Council Meeting be held in Los Angeles on February 28 and 29, 1948.

Adjournment.

In Memoriam

Butterfield, Edwin Rutherford. Died in Burbank, November 29, 1947, age 63. Graduate of the University of Illinois College of Medicine, Chicago, 1912. Licensed in California in 1920. Doctor Butterfield was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

✤

Cooper, Thomas Egner. Died in Davis, December 26, 1947, age 57, of a heart attack. Graduate of St. Louis University School of Medicine, Missouri, 1914. Licensed in California in 1923. Doctor Cooper was a member of the Yolo County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

✤

Magan, Percy Tilson. Died in San Marino, December 16, 1947, age 80, of a heart attack. Graduate of the University of Tennessee College of Medicine, Memphis, 1914. Licensed in California in 1917. Doctor Magan was a retired member of the Los Angeles County Medical Association, the California Medical Association, and Affiliate Fellow of the American Medical Association.

✤

Grundy, Gordon Milton. Died in Newport Beach, December 16, 1947, age 62. Graduate of McGill University, Faculty of Medicine, Montreal, Quebec, 1913. Licensed in California in 1914. Doctor Grundy was a member of the Orange County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

✤

Moffitt, Edwin Jay. Died in Hollywood, December 20, 1947, age 75. Graduate of the Drake University College of Medicine, Des Moines, Iowa, 1896. Licensed in California in 1920. Doctor Moffitt was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

✤

Palmer, Caroline Bell. Died in Lagunitas, December 19, 1947, age 81, after three weeks' illness. Graduate of the Cooper Medical College, San Francisco, 1906. Licensed in California in 1907. Doctor Palmer was a retired member of the San Francisco County Medical Society, the California Medical Association, and an Affiliate Fellow of the American Medical Association.

Sample, Thomas Nelson. Died in Fresno, December 23, 1947, age 70, after a long illness. Graduate of the Cooper Medical College, San Francisco, 1901. Licensed in California in 1901. Doctor Sample was a retired member of the Fresno County Medical Society, and the California Medical Association.

Clarence Gaines Toland—1875-1947

The sudden passing of Dr. Clarence G. Toland on September 2, 1947, created a shock, not only to his colleagues of Los Angeles but to a host of friends throughout California and to many fellows of his profession throughout the Union. Clarence Toland, born in Valley Mills, Texas, on August 1, 1875, came as a lad to California with his physician father, the late M. R. Toland. His preliminary school training was at San Jacinto High School and the University of California, and he received his M.D. degree from the University Medical College in Kansas City (1901). After several years of practice in Pomona, he went to Rochester, working two years in the Mayo Clinic, returning for a brief period to practice in Los Angeles, then back again to Rochester for several years to do additional work in the clinic. Dr. Toland in 1916 returned to Los Angeles to practice in that city for some 30 years, up to the time of his death.

During World War I, at Letterman Hospital in San Francisco, as a Major in the Medical Corps, he acted as Chief of Surgery.

In Los Angeles he was active on the staffs in the Good Samaritan and St. Vincent's hospitals, and in the Medical School of the University of Southern California, where he was professor of clinical surgery. Dr. Toland served as president of the Los Angeles County Medical Association in 1920 and as president of the California Medical Association in 1935. In 1931 he was president of the Western Surgical Association. In these and other organizations Dr. Toland exercised a powerful influence and aided greatly in the advancement of organized and scientific medicine. His gracious manner and wise counsel endeared him to patients, friends and colleagues. His passing leaves a void in the profession that will not be easily filled.

NEWS and NOTES

NATIONAL • STATE • COUNTY

ALAMEDA

President of the Alameda County Medical Association for 1948 is **Dr. William G. Donald** of Berkeley, who was elected to succeed Dr. Theodore C. Lawson of Oakland. Dr. Dorothy M. Allen, Oakland, was re-elected secretary.

BUTTE-GLENN

Dr. Lloyd R. Hennig, Willows, has been elected president of the Butte-Glenn County Medical Society for 1948, succeeding Dr. J. G. Hepplewhite of Chico. Dr. John R. Huffman, Chico, was elected vice-president, and Dr. J. O. Chiapella, also of Chico, was re-elected secretary-treasurer.

INYO-MONO

Dr. C. L. Scott, of Bishop, has been elected president of the Inyo-Mono County Medical Society for 1948, succeeding Dr. Walter L. Wilson. Dr. Lloyd S. Bambauer, also of Bishop, was reelected secretary.

KERN

Dr. Emerson Savage, head of the Kern County Tuberculosis hospital, resigned that position last month to become medical director of the tuberculosis branch of the San Diego County Hospital.

KINGS

Dr. Lloyd Christensen, Hanford, has been elected secretary of Kings County Medical Society. He succeeds in that post Dr. William F. Chamlee, also of Hanford.

Dr. Joseph Stickler has been appointed Health Officer of Kings County to succeed the late Dr. E. C. Foster. **Dr. Paul Murphy** had been serving as acting Health Officer since the death of Dr. Foster.

LASSEN-SHASTA-SISKIYOU-TRINITY

Plans for a tuberculosis sanitorium to serve Lassen, Shasta, Siskiyou and Trinity counties have been agreed upon by the four counties, and construction work on the buildings, which are to be located in Shasta County, will be started later this year.

LOS ANGELES

Dr. Norman B. Nelson, associate professor of public health and chairman of the public health division in the University of California at Los Angeles, has been appointed assistant dean of the medical school. He will assist Dr. Stafford Warren, dean of the new medical school, in selecting a staff and planning the buildings.

Dr. William H. Leake has been elected president of the Los Angeles County Medical Association for 1948, succeeding Dr. E. T. Remmen. **Dr. Carl F. Rusche** has been elected vice-president to succeed Dr. Leake in that position, and **Dr. Richard O. Bullis** has succeeded Dr. Carl L. Mulfinger as secretary-treasurer and as editor of the association's Bulletin. Dr. Louis J. Regan continues as legal counsel for the association.

Recently returned from a tour of duty with the Army Medical Corps, **Dr. J. Cutler Roberts** has opened offices at 11472 Gateway Boulevard, Los Angeles.

At the annual election of officers of the **Los Angeles Society of Allergy** (a Section of the Los Angeles County Medical Association) the following officers were elected for 1948: Dr. Willard S. Small, Pasadena, president; Dr. Hyman Miller, vice-president, and Dr. Frank G. Crandall, Jr., secretary-treasurer; Dr. George Piness, who was president during 1947, was elected to the Executive Council for 1948.

RIVERSIDE

Officers of Riverside County Medical Association for 1948 are **Dr. Arthur W. Miller**, president; **Dr. Harold M. F. Behneman**, vice-president; **Dr. Cecil Lord**, secretary-treasurer. The retiring president is Dr. Franklyn D. Hankins.

SAN FRANCISCO

The Western Society of Electroencephalography held its first scientific meeting at Toland Hall, University of California Hospital in San Francisco, November 8, 1947. A constitution was adopted which offers active membership to doctors of medicine actively engaged in the field of electroencephalography. Investigators in related scientific fields are eligible for associate membership. **Dr. Robert B. Aird**, San Francisco, was elected president; Dr. Knox H. Finley, San Francisco, vice-president; and Dr. Nicholas A. Bercel, Los Angeles, secretary-treasurer. The membership committee is made up of Dr. Henry Newman, San Francisco, chairman; Dr. John Moriarty, Los Angeles, vice-chairman, and Drs. Aird, Finley, and Bercel. **Next meeting** will be held in San Francisco, April 10-11, 1948, directly preceding the annual meeting of the California Medical Association. Those wishing to contribute presentations are invited to contact the member of the program committee in their community. Those interested in joining the society can secure application blanks from the secretary-treasurer.

SAN JOAQUIN

Seeking a solution to the problem of the **shortage of hospital beds** in Stockton, the San Joaquin County Medical Society has joined forces with the Stockton Chamber of Commerce to investigate the matter. The Medical Society passed a resolution directing **Dr. E.**

P. Halley, newly elected president of the organization, to appoint a committee of four to work with the chamber in formulating a solution. This action followed a report by Dr. W. C. Curphey, showing an acute shortage of hospital facilities in the entire county.

SAN MATEO

Officers of the San Mateo County Medical Society for 1948 are: President, Dr. Harry E. Mason of Redwood City; vice-president, Dr. Meade Mohun, San Mateo; secretary-treasurer, Dr. Albert G. Miller, San Mateo.

SANTA BARBARA

Dr. Charles A. Preuss of Santa Barbara has been elected president of the Santa Barbara County Medical Society, succeeding Dr. D. H. McNamara. Other officers named were: Dr. Rodney F. Atsatt, president-elect; Dr. Douglas F. McDowell, secretary-treasurer, and Dr. George H. Coshow of Carpinteria and Albert M. Beakler of Santa Maria, vice-presidents-at-large. Drs. McDowell, Warren R. Austin, and Harry C. Devighne were named delegates to the California Medical Association with Dr. McNamara and Dr. Alfred B. Wilcox as alternates.

SANTA CLARA

Dr. John C. Wilson has been elected president of the Santa Clara County Medical Society for 1948, succeeding Dr. Joseph B. Josephson. Dr. Leslie B. Magoon, formerly secretary was named president-elect, and Dr. Richart Pfaff became secretary. Dr. George W. Waters was elected first vice-president.

TULARE

The tuberculosis death rate in Tulare County last year was higher than for any other county in the state, according to a report by Dr. R. L. Knight, county health officer. Inadequate facilities and personnel have made the county health department one of the poorest in the state, he said. He pointed out that whereas the State Department of Public Health recommends one public health nurse for every 3,500 people, Tulare County has only one for every 32,000.

Dr. J. J. McNearney, recently released from the Navy Medical Corps, has opened offices in Tulare. Dr. McNearney had practiced in Merced before entering the Navy.

VENTURA

Dr. Frank E. Gallison, of Ojai, has been elected president of the Ventura County Medical Society for 1948. Retiring president is Dr. D. M. Clark of Ventura. Dr. A. A. Morrison of Ventura was reelected secretary.

GENERAL

Dr. Harold M. Hildreth has been appointed Chief of Clinical Psychology for the Veterans Administration by Dr. Paul M. Hawley, VA's Chief Medical Director. Dr. Hildreth has been serving as Chief of Clinical Psychology in VA San Francisco Branch Office.

Among nearly $750,000 in **National Cancer Institute grants** recently announced were $17,820 to Stanford University (J. M. Luck) for studies in liver proteins, $13,608 to the University of California (Dr. S. C. Brooks) for research on ionic exchanges during growth, differentiation, and development of marine eggs, and $5,724 to the U. C. College of Pharmacy (John J. Eiler) for a study of the efficiency of aerobic and anaerobic phosophorylation in surviving slices of normal and tumor-bearing tissues.

The 1948 session of the **National Conference on Medical Care** will be held in Chicago, February 8. In one part of the program, two viewpoints on the subject "The Practice of Medicine by Hospitals, Health Departments and Medical Schools" will be developed through papers to be presented by **Dr. Lowell S. Goin** of Los Angeles and Mr. Everett W. Jones, general manager of the Modern Hospital, Chicago.

INFORMATION

Suggested Program for Public Relations for the American College of Chest Physicians

[*The following is a report submitted to the American College of Chest Physicians by its Committee on Public Relations under the chairmanship of William C. Voorsanger, M.D.*]

Questions of public relations for any group are very important. We must differentiate public relations from propaganda and from publicity. Public relations should mean the carrying on of a program which wins support from our own members and from medical and lay people at large. How to achieve this purpose is difficult. As your committee sees it, it should be divided into five headings.

I. *Public Relations in Regard to Members of the College and Other Physicians Practicing the Specialty of Chest Diseases.*

The work of our governing body and those who actively participate in the programs of the college should be of such a high character that all Fellows and Associates will be justly proud of their organization. Mediocrity will at all times lead to poor public relations. At the present time, means of communication among members of the college is through our journal, *Diseases of the Chest.* This has improved greatly as the years have gone by, and through its constant improvement, it can be a source of instruction and guidance to all in the chest specialty. Our newly created American Medical Association Section on Diseases of the Chest, for which we have struggled so many years, should be always officered by the leading chest specialists of the country and the programs should be of an excellence which would justify the faith of the House of Delegates in creating this section.

II. *Public Relations in Regard to the General Practitioner.*

Your committee considers the duty of the chest specialist to the general practitioner as the most important in the realm of public relations. There is accumulating evidence that the general practitioner, who is usually the physician first to see a chest condition, either tuberculous or non-tuberculous, is totally ignorant of clinical methods of diagnosis as far as this disease is concerned. He depends almost exclusively upon a report of an x-ray laboratory. Experiences have shown that roentgenologists in their interpretations blunder as often as chest men. Therefore, it becomes mandatory to see that the general practitioners recognize chest pathology early. If there is any doubt, consultation should be sought. If the general practitioner, the roentgenologist and the chest specialist would only cooperate instead of working independently, many errors of diagnosis could be avoided. Your committee feels that the greatest reason for the creating of a special section on chest diseases is the education of the general practitioner in early diagnosis of chest conditions. Our public relations should be directed towards inviting all general practitioners to attend our meeting of the Section of Chest Diseases at the American Medical Association. We should publicize this fact: We recognize specialists but we particularly want general practitioners. If possible, editorials should be written and okayed by this committee, not only for our own journal, but for the American Medical Association Journal and state journals, stressing the importance of this new Section on Diseases of the Chest, particularly as it pertains to the education of the general practitioner in this specialty.

III. *Public Relations in Regard to Medical Teaching Institutions.*

Your committee has been told that this properly comes under the committee on medical education. We believe, however, that public relations properly handled could pave the way for a committee which has charge of improving medical education on chest diseases in the teaching institutions. Literature could be sent to the heads of medical departments showing how important it is for the medical student and intern to learn more and more about diseases of the chest, particularly tuberculosis, before he starts practicing on his public.

IV. *Public Relations in Regard to the Public.*

Your committee feels that this is a very important chapter. As one member of the committee so well commented, the medical fraternity as a whole should be engaged at the present time in combating so-called socialized or state medicine. He states: "In all of these things, I think that the public relations sections of our societies should be on the alert for every opportunity to obtain favorable publicity. The idea of this publicity would be to create a receptive attitude in the public mind for ideas emanating from the profession. So far as we are concerned in the College, we could do our best work through direct contacts with the general practitioner and the public in reference to our own field and by stimulating the larger organizations, such as the American Medical Association, toward the activities which it is their duty to undertake." The public should be fully advised what the American College of Chest Physicians is doing, so that it will realize our object in our

specialty is to continually improve standards and thus better provide for our patients. The public will not oppose us when they know that we are working for something besides the satisfaction of our own selfish aims. We, as a group, know that we are exploring many fields, diagnostically and therapeutically, which will benefit our public more than it will us or our pocketbooks. It is our duty as individuals, and as a group, to let the lay public know what we are doing.

V. *Public Relations in Regard to the Press.*

Public relations in regard to the press is vital. We must be willing at all times to tell the newspapers of this country the truth. We must try to guide them into making correct statements regarding research "cures." We must see that publications which come into the hands of the press are properly edited as to truth and language. In other words, we should be at all times cognizant of the power of the press, but we should never forget that as a group we are powerful enough to control that press with regard to the truth of its statements regarding our activities.

Your committee firmly believes that the above five sections if properly carried out would cover a sound program for College public relations. The committee also feels that in order to properly carry it out it might be necessary to have a department in our office called the Department of Public Relations. No individual or group of individuals has the time to successfully carry out this program except in a desultory sort of fashion. However, until the time arrives that the college has the funds to provide a full-time public relations department, your committee can function in the best manner possible consistent with the other duties of each member.

BOOK REVIEWS

BENJAMIN SILLIMAN—PATHFINDER IN AMERICAN SCIENCE. By John F. Fulton and Elizabeth H. Thomson—(Recommended by the Book-of-the-Month Club.) Henry Schuman. Price $4.00.

Fulton and Thomson bring forth in the biography of Benjamin Silliman the spirit and character of a great American pioneer educator in the field of the physical and natural sciences. Silliman, a graduate of Yale, became its first Professor of Chemistry, and, like the true pioneer, went abroad with pistols, sherry and brandy, and some of Yale's money, to do the promethean task of bringing back the scientific culture of the old world to the young university of the new world. The journals and logs of his travels were extremely popular, highly praised and widely read in his time. Silliman was a beloved member of the faculty, his lectures the object of much discussion, and his practical experiments before his classes impressed the principles of chemistry on many generations of Yale students, all of whom learned to love him.

He was a responsible force in the organization of the Yale Medical School (1813), and established the American Journal of Science (1818). He was an important figure in the organization of many artistic and cultural endeavors in his native ambient. Silliman was in the vanguard of the progressive movement in science and was the moving spirit in the development of the Sheffield Scientific School at Yale, from which, in the past century, have stemmed many outstanding contributions to physiology, biochemistry and nutrition.

The chapter on the early medical schools of America brings forth an interesting account of the problems which beset the medical educator in the beginning of the 19th Century, at which time only 10 per cent of the persons practicing medicine had received a medical degree from a responsible college, and less than 2 per cent obtained their degrees in America.

This biography offers another link in the history of American men of science. The publisher has presented the book in a pleasing and readable format.

* * *

HODGKIN'S DISEASE. Jackson and Parker, Oxford University Press, New York. Price $6.50.

Ever since the time of Thomas Hodgkin, doctors have been trying to bring some order into that group of obscure disorders featured by lymphnode and often splenic enlargement. Under the heading of Hodgkin's Disease and Allied Disorders, Jackson and Parker once more undertake this task. Parker and Jackson divide the group into Hodgkin's Disease, reticulum cell, sarcoma, lymphocytoma and lymphoblastoma, lymphosarcoma, giant-follicle lymphoma, plasmocytoma and endothelioma. It can hardly be said that a final clarification of the subject is achieved, especially since Hodgkin's Disease is further subdivided into Hodgkin's paragranuloma, Hodgkin's granuloma, and Hodgkin's sarcoma, the first two apparently possessing the features of an infection and the latter those of a malignant tumor. At the same time all seem to be successive stages of one process. The authors emphasize the presence of Reed-Sternberg cells as necessary for the diagnosis of all forms of Hodgkin's Disease.

Etiology, pathology, clinical features, and treatment of the various conditions all are discussed; there are excellent photomicrographs of the lesions, bibliographies, and index. It is of interest that no reference is made to the excellent monograph of L. T. Webster which appeared in 1922 on Lymphosarcoma and Allied Conditions. Not everyone will agree with all the writers' views but at the moment this monograph is probably the best summary of the subject, coming as it does from the pen of men who have wide first-hand experience with this perplexing group of disorders.

* * *

HISTORY OF MEDICINE. By Cecilia C. Mettler, edited by Fred A. Mettler. Illustrated. The Blakiston Company, 1947. Price $8.50.

Mettler's History of Medicine fills the great need for a book giving much on the works of numerous men throughout the history of medicine. It is a readable, comprehensive text on medical history arranged to trace the development of various branches of medicine, thereby making the subject of greater interest to the student and teacher.

This book of Mettler's shows evidence of long, painstaking work and can be compared to only one other work, now out of print, namely, Garrison's History of Medicine. Garrison's book was satisfactory for some 30 years, combining usually a portrait with the description of an individual's contribution in science and medicine. Mettler's work, because of its arrangement, gains much in having chapters such as the Anatomy of the Seventeenth Century, in which for instance on page 66 is an account of Thomas Willis and his contribution to anatomy. However, mention of other of his contributions is scattered through the book, appearing under such headings as Physiology of the 17th Century, Neurology and Psychiatry, Pediatrics, Surgery, Ophthalmology, and finally, on page 1087, under Rhinolaryngology. Although it is nice to have Willis, his portrait and his contributions all mentioned in one place in Garrison, yet Mettler's arrangement makes it a more readable text with the material so organized as to meet the needs of the specialist who is interested in a certain field, such as the lymphatics, or bacteriology.

It is curious and disconcerting that in Mettler's book such artists as Christian Koeck, and certain contemporaries of the reviewer who have written articles about men long dead, should have their names as authors in the same heavy bold face type as the names of their illustrious subjects. In fact the first name in heavy type to be encountered in Mettler's text, on page 5, is Georg Sticker (1860-), and not the name J. Aesculapius!

Although indexed as appearing on page 4, Smith's papyrus is not mentioned until page 282 under physical diagnosis. The subtitles of subdivisions of the chapters could be in a more contrasting type. Chinese, Hindu and Japanese medicine are not covered so well as in Garrison's book.

In the Editor's preface is the excuse for not having the illustrative material that would have made this book outstanding. If the illustrations of Garrison had only been added, Mettler's book would be the most valuable and illustrious history of medicine.

Mettler's History of Medicine can be recommended as the best of single volume books available. If one could secure a Garrison, then these two books would give the best on the history of medicine.

* * *

THE LOUSE: An Account of the Lice Which Infest Man, Their Medical Importance and Control. By Patrick A. Buxton, Baltimore, The Williams & Wilkins Company, 1946.

The first edition of "The Louse," which was published nearly eight years ago, was a standard book to the medical entomologist. In the revised edition completed in 1945, and

thus including the published work only up to the end of 1944, the extensive advances in knowledge of the louse achieved during the war years are fully recorded. Every one of the chapters dealing with the anatomy, biology, medical importance and control of lice has been enriched by new facts. The sensory physiology and behavior under controlled conditions are fully described. Data on the lethal effect of high temperature on eggs and on the distribution of lice in various seams and regions of clothing are extensive. The entomology of typhus and relapsing fever is presented in clear and concise form. Rickettsia mooseri is described as Rickettsia muricola. (In the new edition of Bergey's "Manual of Determinative Bacteriology" it is christened Rickettsia typhi!)

In the chapter on means of control of lice, the spectacular progress made in that field is reflected. The uses and methods of application of DDT and other insecticides are detailed. Evidence presented in Chapter 6 supports the view that the head louse and body louse are well-defined biological races. An appendix details the rearing and feeding of lice. At the conclusion of the book over 230 references are listed.

Although the revised edition is nearly half again as long as the first edition, the book remains unchanged in size and weight because of deterioration of the quality of the paper and binding.

* * *

140 MILLION PATIENTS. By Carl Malmberg, Public Relations Advisor, Information Specialist for U.S.P.H.S. and Chief Investigator for U. S. Senate Subcommittee on Health and Education. (Pepper.)

Those who acclaim this book include: Allen M. Butler, John P. Peters, Ernst P. Boas, Channing Frothingham, Claude Pepper, Herman Kabat.

There is an old adage that says, "Birds of a feather—." The book itself seems dedicated to three major premises, unstated but developed in detail.

1. That present medical care in the U.S.A. is a failure.
2. That any voluntary approach to the problem would fail.
3. That Compulsory Health Insurance such as the Wagner-Murray-Dingell Bill sought is the only answer.

The first principle of logic, that any argument based on false premises still remains false in toto no matter how cleverly developed, seems to have been missed entirely by the author. The possibility that his major premises are false is nowhere admitted in the book, indeed such a thought apparently never entered his mind. In developing his first major premise he quotes statistics to show that U. S. is ninth in health. Australia, New Zealand, Uruguay, Canada, Iceland, Denmark, Norway, and Netherlands, he says, are better. He does not call attention to the facts that:

1. Australia, New Zealand, Uruguay and Canada are essentially pioneer countries with sturdy, strong stock with concentration of population factors and climate differing greatly from the U.S.A.
2. Iceland, Denmark and Norway are countries essentially with long cold climatic conditions curtailing diseases spread easily in warm countries with poor sewage disposal and sanitary facilities.

That Germany, Russia and England, with many of the factors common to the U.S.A., rank far below the U.S.A. in health even though they have had the advantages (?) of compulsory health insurance laws for years, is a fact that the author seems loath to bring out. Among other things in the steady stream of false interpretation of statistics is that of the findings of the U.S.A. Selective Service. The proper evaluation of these figures as analyzed by Goin, Bortz and many others have been ignored—perhaps because these men explode the myth and place the onus where it should rest.

Interestingly enough then the author goes on to show that really the greatest cause of illness is poverty and that money is the only common denominator. Then slyly he admits that a change in the economic status of the people would be the direct and proper way to attack the problem and that if the people were on better financial footing the problem would be solved. But he decides that such a method is too great a problem and does not fit in with the plans of those who have other ideas and therefore we should attack the enemy through a side entrance apparently hoping to destroy illness by hampering the efforts of the medical profession and fighting anything except poverty. He quotes Falk, Klem, and Sinai. Again, "Birds of feather—." A pet "peeve" seems to be held against individual practitioners or family doctors. He intimates that group practice is the only efficient way to practice medicine—that your doctor wastes your time, your money, and your health. Is it that he fears the "milk of human kindness" that proverbially has flowed from the family doctor whose patients love him and ask his advice when political schemers attempt to "put over" a Wagner-Murray-Dingell Bill, or a Warren Bill?

Malmberg wails loudly against "A.M.A. tactics" apparently because these "tactics" have so far preserved for Americans some of their freedoms. Is it because these tactics do not "set well" with the bureaucratic domination theme?

The author depreciates all efforts along voluntary lines to answer the problem. He reverberates the old cliché and cry of "too little and too late" apparently ignoring that even when foolish leaders in their "hey day" sought to hide their own shortcomings and lack of vision, the great American people came through with "enough and in time."

He ends his book with the statement that the 140 million people can't be wrong. He draws the deduction therefore that Americans will embrace his schemes and live happily and healthily ever after. Even this premise could be false. An old ditty often quoted, said in part:

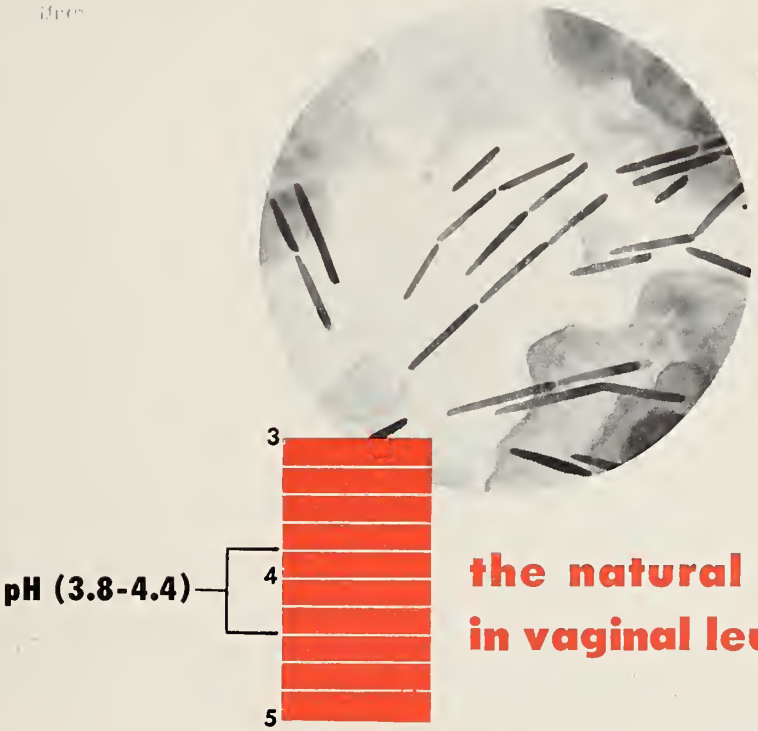
> "He was right, dead right as he strode along,
> But he's just as dead as if he were wrong."

The book, however, is fairly well written—appeals to those people who relish discord and demagogic attacks, and is an expertly drawn propaganda document. Therein lies its danger. It should be read by Doctors of Medicine if only to be able to answer the ridiculous fallacies that readers of the book will otherwise accept.

* * *

PLAGUE. By Arthur N. Foxe. The Hobson Book Press, 1947. Price, $2.50.

This volume of 122 pages, under the title of "Plague," deals with the life of René Théophile Hyacinthe Laënnec (1782-1826), the "inventor of the stethoscope and father of modern medicine." The old term for tuberculosis, "white plague," was abbreviated to the somewhat misleading term, "plague." In its present form the book represents the second edition of a very limited first issue of six copies which appeared in 1930. Aided by the review of a large mass of literature, poems, letters of the Laënnec correspondence and the carrier correspondence of the well-known author, Dr. Arthur N. Foxe, associate managing editor of the *Journal of Nervous and Mental Diseases*, has developed a very commendable biography of Laënnec. Short and pointed sentences depict his life and the familial relations in Brittany, his love for nature and his relentless studies and work in Paris under the shadow of the "tubercle," and economic difficulties. "Medicine and medicine and medicine—hour upon hour, upon hour." "The wards—flesh without destiny, not knowing in what world it would get its next sustenance. The autopsy—flesh with destiny." These few samples of the style should invite many to read this delightful book. Through his correspondence one is led to appreciate the nervous, restless, modest personality, endowed with generous, tolerant and refined feelings.



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*Baehme, E. J.: Trichomanas Vaginalis Vaginitis; Diagnosis, Treatment, Causes of Failure in Treatment, S. Clin. North America 25:545 (June) 1945.

SEARLE

RESEARCH IN THE SERVICE OF MEDICINE

BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA

By Frederick N. Scatena, M.D.
Secretary-Treasurer

Board Proceedings

The following tables give the number of applications filed and the number of certificates issued during the year 1947 as compared with the year 1946.

Applications Filed

Class	1946	1947
Written Examination	548	501
Reciprocity (other states)	1495	1132
Government Credentials	109	86
National Board Credentials	272	244
Total	2424	1963

Certificates Issued

Class			1946		1947
Written Examination			439		535
Reciprocity (other states)					
Direct Reciprocity		1082		884	
Oral Examination		207	1284	148	1032
Government Credentials			70		55
National Board Credentials			247		246
Total			2045		1868

* * *

The State of Illinois endorsed the largest number of reciprocity applicants to this state; the total number being issued certificates was 200. New York was second with a total number of 105 applicants.

The Board endorsed the California medical credentials of 167 California licentiates to other states during 1947. This was 41 less than those endorsed during 1946.

* * *

The next regular meeting of the Board will be held in Los Angeles, March 1 to 4 inclusive. Written examinations will be conducted at this time as well as hearings on disciplinary matters and any other business that may come before the Board. Oral examinations will be held on February 28 and 29 in Los Angeles, and oral and clinical examinations for graduates of foreign medical schools on February 29.

DANGER OF POLIO AFTER TONSIL OPERATION NOT YET ESTABLISHED

Does a tonsil operation make a child more susceptible to polio? That is a question that many doctors have debated, and a definite answer must be found in the near future, according to Daniel S. Cunning, M.D., New York, writing in the current issue of *Archives of Otolaryngology*, published by the American Medical Association.

At a May 1946 meeting of the American Laryngological, Rhinological and Otological Society, Inc., it was suggested that members of the society carry on a nationwide survey to discover how many cases of polio actually occur after tonsil operations. Dr. Cunning reports rather inconclusive results from that survey, although accurate reports were received from 16 states on a grand total of 5,872 polio cases. Since during 1946 there were 25,204 cases of polio-

(Continued on Page 36)



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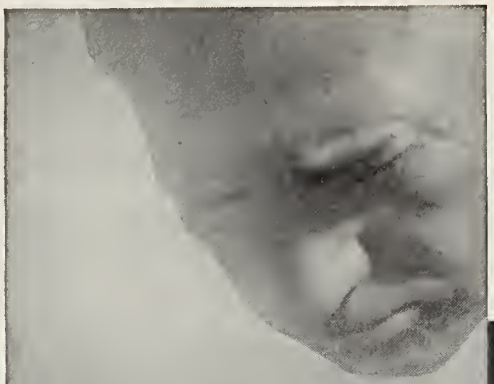
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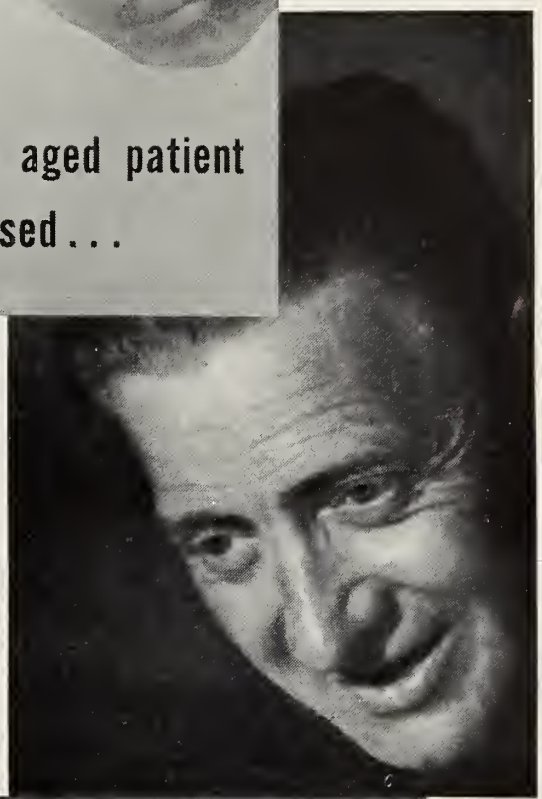
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DANGER OF POLIO AFTER TONSIL OPERATION NOT YET ESTABLISHED

(Continued from Page 34)

myelitis in the nation, he received pertinent information on 23 per cent of all cases. Of these, 91 or only 1.6 per cent had been preceded by tonsil operations two months or less before symptoms appeared.

Incidence of poliomyelitis following tonsillectomy varied so much from state to state, however, that the percentage was completely different before reports from Connecticut, Florida and the heavy epidemic state of Minnesota were counted. Basing his report on information received from 13 states on a total of 2,476 cases, he found that 62 or 2.5 per cent had been preceded by tonsil operations. Furthermore, 4.7 per cent of the cases of polio of the bulbar type followed tonsillectomy, while this was true of only 1.9 per cent of the cases where the spine was involved.

Dr. Cunning warns that if the present practice of performing tonsil operations in the summer months is changed because of fear of poliomyelitis, as it appears already to be changing, the danger of respiratory infections will substantially increase. Furthermore, if the tonsils become infected in the summer and their removal is postponed, other diseases may develop. He points out that for doctors to expose their patients to such dangers would not be good medicine unless their fear of polio is proved to be well founded.

(Continued on Page 38)

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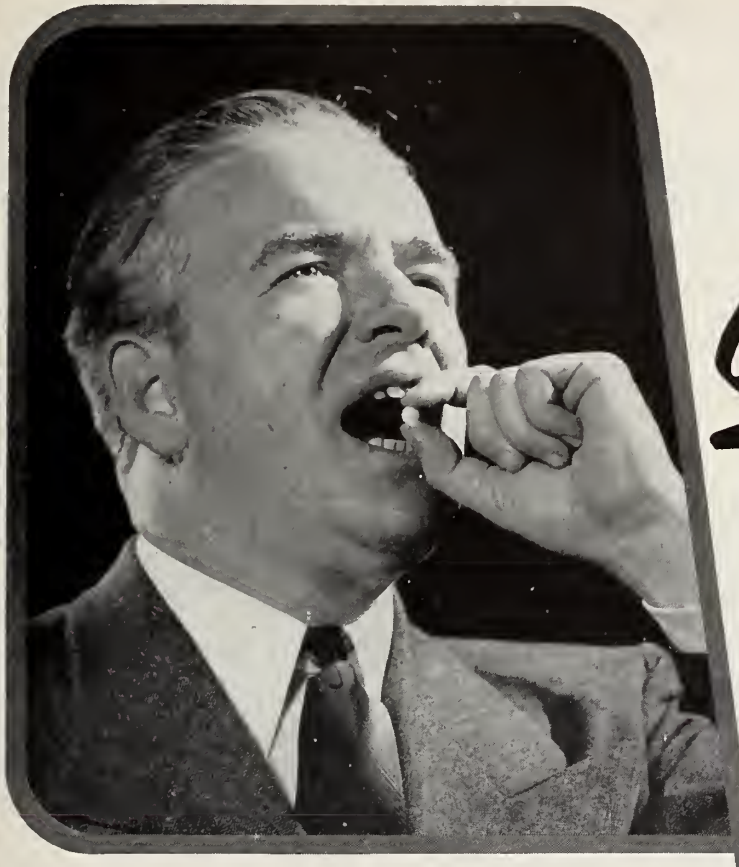
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DANGER OF POLIO AFTER TONSIL OPERATION NOT YET ESTABLISHED

(Continued from Page 36)

"I propose that a study be made of several thousand children who will be tonsillectomized during the months of June, July, August and September," he writes. "A number of hospitals should be selected, located in different parts of the country so that local epidemiologic characteristics may be properly balanced." He suggests that these children then be followed up for three months in order to find out exactly what proportion contract polio, and that the results be compared to the incidence of poliomyelitis.

"There is one more point of interest in this study," Dr. Cunning concludes. "Dr. John A. Anderson made a study of the epidemic which occurred in Utah in 1943. Poliomyelitis was reported to have occurred in 232 children between the ages of three and 16. In 17 of these it was preceded by tonsillectomy. When one calculates the percentage incidence, one finds it to be 7.3 per cent for the Utah study, compared with 2.5 per cent in the present report. Furthermore, Dr. Anderson found that 46 per cent of the cases of bulbar involvement were preceded by tonsillectomies, contrasted with 4.7 per cent in the present study. The wide difference of these findings is a subject for more than mere speculation. Dr. Anderson's study was well conducted. It certainly was true of Utah, more particularly Salt Lake City, in 1943. Is it true of the nation as a whole?

"No one has produced the answer as yet. It is of primary interest . . . that a definite answer be found."



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Peptic ulcer, which is tenth among causes of death from chronic illness in the United States, is a condition in which a craterlike area of tissue destruction appears either in the gastric pouch (stomach ulcers) or, much more frequently, in the first part of the small intestine leading into the stomach (duodenal ulcers).

Treatment usually consists of a "soft" diet of frequent small meals, plus alkalis to counteract the hyperacid condition, and sometimes mild sedatives.

There is a decided tendency toward recurrence of symptoms even after the original ulcer has healed, however—especially if there is emotional strain or worry. In cases which do not respond to medical treatment some doctors therefore advocate cutting the vagus in order to reduce gastric overactivity and excessive secretion and keep the stomach from sharing the troubles of the brain. In order to correct these conditions, every one of the fibers of the vagus, a cranial nerve with two branches which run down

(Continued on Page 44)

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**Charles J. Marshall, New York Journal of Medicine, Vol. 34, Aug. 15, 1934*

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REPORT GOOD RESULTS IN PEPTIC ULCER BY CUTTING VAGUS NERVES

(Continued from Page 42)

alongside the gullet to fan out over the exterior of the stomach, must be severed. Since it is easy to overlook some of the fibers the operation has not always been successful.

Dr. Thorek reports in some detail on 25 cases in which he performed this operation. There were three deaths, but none could be directly attributed to the operative procedure. "In my remaining 22 cases," he says, "the results have been most encouraging. It is indeed gratifying to note the immediate relief obtained after vagotomy and the ability of the patient again to enjoy a full meal and lead a normal life." In addition, he reports 15 operations performed since submission of his article—with equally good results and no deaths.

"What the future holds for the functions of the liver, pancreas, kidney and intestinal tract following vagus nerve section cannot be stated at this time," he concludes. "Although these pros and cons cannot be definitely settled, the question should be approached and followed with an unbiased attitude. Whether or not the vagus nerves will regenerate can be proved only by careful follow-ups of these patients.

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(Continued on Page 58)

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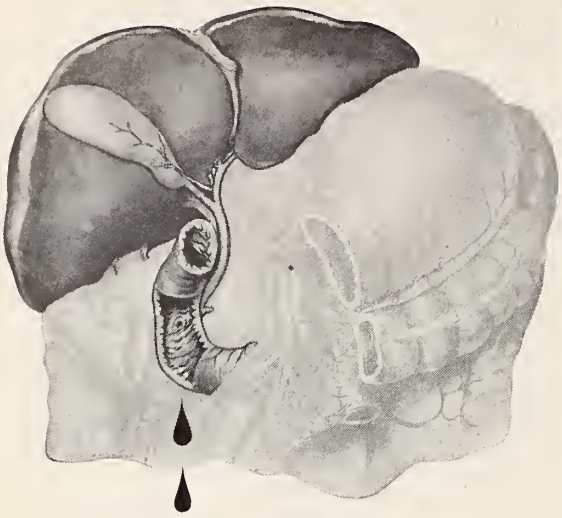
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*Albrecht, F. K.: Modern Management in Clinical Medicine, Baltimore, The Williams and Wilkins Co., 1946, p. 170.

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PRODUCT USED TO BLEACH MOST WHITE FLOUR GIVES DOGS FITS

Eleven investigators report in *The Journal of the American Medical Association* that nitrogen trichloride, commercially known as "agene" and used to bleach 90 per cent of all white flour milled in North America and England during the last 25 years, has a high toxicity and produces epilepsy and other neurologic disorders in experimental animals.

Experiments on human beings, however, revealed no neurologic symptoms after they had eaten "agenized" flour or "agenized" gluten in amounts and for periods of time which unfailingly produce something resembling human epileptic fits in dogs.

The experimental work on dogs, monkeys, cats and rats reported in one article in a recent issue of *The Journal* was done by Captain Maurice L. Silver, Chicago, and First Lieutenant Elmer P. Monahan, Kansas City, Mo., both of the Medical Corps, Department of the Army; Robert E. Johnson, M.D., D.Phil. (Oxon.), Chicago; Robert M. Kark, M.R.C.P. (Lond.), Brookline, Mass., all four from the Medical Nutrition Laboratory in Chicago under the jurisdiction of the Army Surgeon General; Solomon S. Zevin, B.S., of the Quartermaster Food and Container Institute for the Armed Forces, Chicago; and J. Raymond Klein, Ph.D., of the Department of Psychiatry, College of Medicine, University of Illinois, Chicago, and the Illinois Neuropsychiatric Institute, Chicago.

In their experiments, the animals were fed a "nutritionally adequate diet" containing at least 75 per cent of unusually heavily agenized white wheat flour—a substantially higher proportion than would be used in an ordinary human diet. Definite neurologic abnormalities developed within a week. Dogs exhibited changes in behavior, failure of muscular coordination, weakness and typical epileptic convulsions, the article says, but the clinical picture varied from animal to animal. Abnormalities in the rhythm pattern of the brain indistinguishable from those of human epilepsy appeared within 48 to 72 hours.

Cats showed similar changes, except that failure of muscular coordination predominated and convulsions were less pronounced. "In order to produce neurologic changes larger amounts of toxic flour (per kilogram of body weight) were required for cats than for dogs," the report states. Monkeys showed lack of coordination, weakness and tremors sometimes accompanied by changes in the rhythm pattern of the brain. Rats showed an abnormal accumulation of reddish pigment around the head, eyes and nose.

"We suggest that, since the agene process is only 25 years old and since it is notoriously difficult to duplicate in animals disease processes which develop during a life span in man, investigation should be directed toward those diseases of man which have clearly increased in incidence subsequent to the introduction of the agene process," these investigators conclude. "Moreover, primary emphasis should be directed toward diseases having a neurologic component, such as duodenal ulcer, schizophrenia and disseminated sclerosis. We are investigating some possibilities. For instance, allergy studies are being

conducted on a hospital population to determine whether there is sensitivity among any groups of patients to agenized proteins."

The authors of a second article in *The Journal*, who also investigated the effects of agenized flour on human beings, are from the Department of Biochemistry of the College of Agriculture and the Departments of Surgery and Medical Electronics of the School of Medicine, University of Wisconsin, Madison. They are G. W. Newell, M.S.; T. C. Erickson, M.D.; W. E. Gilson, M.D.; S. N. Gershoff, B.A., and C. A. Elvehjem, Ph.D.

The experiments of this group verified the susceptibility of dogs and, in a lesser degree, of cats, to nitrogen trichloride. A direct correlation between the level of agene used to bleach flour and the time required for the onset of fits was found. Even the dogs receiving flour treated with about the same small amount of agene used in standard commercial practice developed mild fits in from 13 to 39 days when it was fed to them as 84 per cent of their ration. Those getting a ration containing only 30 per cent of flour—comparable to the amount included in the average American diet—showed no such symptoms after 12 weeks, however. Nor did fits occur in dogs fed "untreated flours or flours treated with benzoyl peroxide, chlorine dioxide, chlorine, nitrogen dioxide or methyl dichloramine." The toxic factor was shown to be "associated with the protein of wheat but not with the lipid or carbohydrate."

This group of investigators did not find that nitrogen trichloride-treated wheat products had any adverse effect on rats, chicks or guinea pigs, and they reported that although monkeys showed some changes in their brain rhythm patterns they did not show any of the clinical symptoms associated with running fits. In a necessarily limited experiment on a group of hospital patients they could find no evidence whatsoever that nitrogen trichloride was toxic to man.

An editorial appearing in the same issue of *The Journal* points out that the nitrogen trichloride bleaching process has for years been officially recognized as a safe method of aging flour artificially.

"Such exposure not only improves the baking quality of flour quickly and effectively but also produces a larger softer loaf of bread with a silkier and somewhat whiter crumb," the editorial says. "For years the method has been preferred by industry because of its supposedly harmless nature. Moreover, the effect of the gas permits prompt utilization of flour in contrast with the long time necessary to mature the flour in storage warehouses. Now scientific investigations carried out in England and in the United States have cast suspicion on this process. While evidence available . . . need not produce alarm in the minds of people generally, it is sufficient to cause the Food and Nutrition Board of the National Research Council . . . to recommend continued investigation of the toxicity of the nitrogen trichloride process, the development of alternative processes, and a reduction in the use of the nitrogen trichloride technic to the absolute minimum."

Since the publication in 1946 of a report by a British scientist, Sir Edward Mellanby, F.R.C.P., *The Journal* continues, "the Public Health Service.

(Continued on Page 52)

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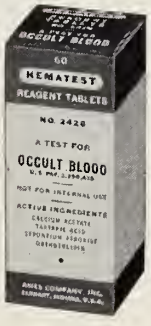
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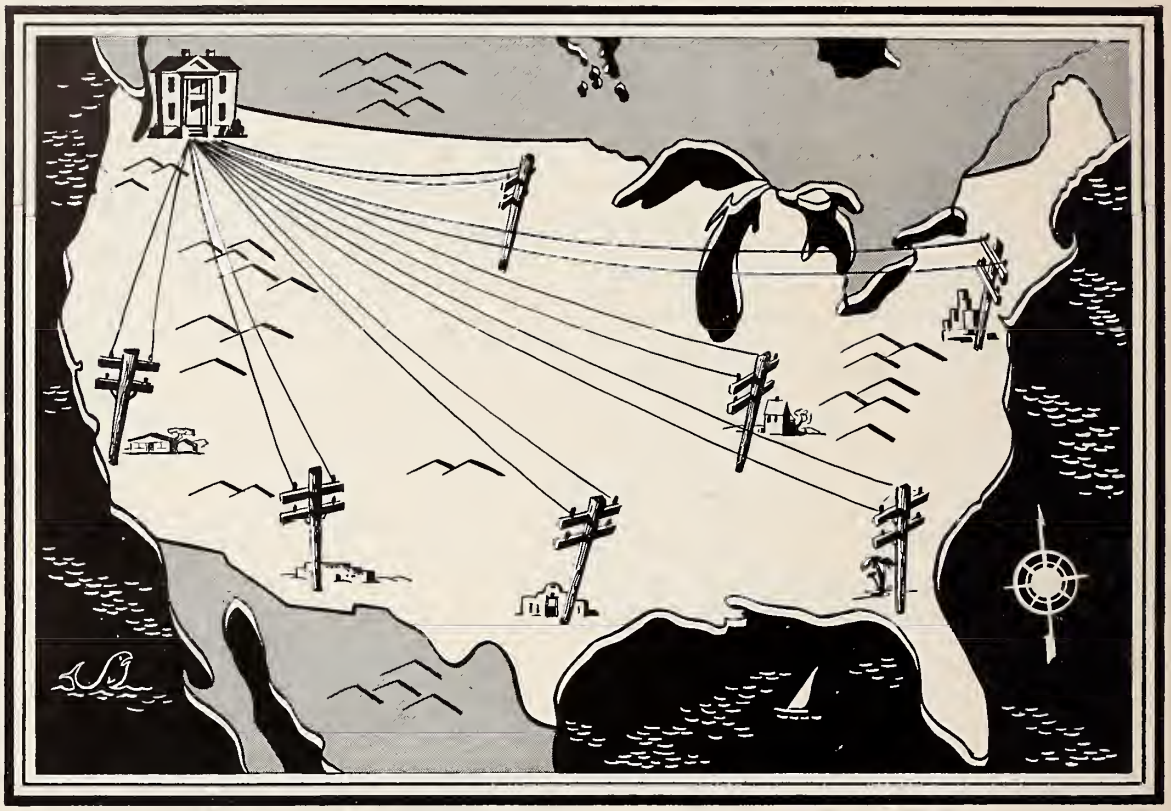
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1. Lehr, D.: Proc. Soc. Exper. Biol. & Med. 64:393, 1947.

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PRODUCT USED TO BLEACH MOST WHITE FLOUR GIVES DOGS FITS

(Continued from Page 49)

the Food and Nutrition Board of the National Research Council and the Council on Foods and Nutrition of the American Medical Association have been participating actively in a consideration of this problem. These groups are also cooperating with the Food and Drug Administration in intensive research, as revealed by the experimental work reported in this issue of *The Journal*. As will be seen from these results, evidence is not yet available to demonstrate that flour treated with nitrogen trichloride has a toxic effect on man to the extent that it affects animals and particularly the dog. Research must continue until the true nature of the toxic effect of flour treated with this agent is apparent. . . .

"Hasty and intemperate action might provoke a food crisis at a time when such a situation would be far more serious than any effects related to the use of the flour concerned. Fortunately, Wallace and Tiernan Products, Inc., Newark, N. J., which is the supplier of agene . . . and the leading millers and bakers have indicated their willingness to comply voluntarily with any measures recommended by responsible groups of scientists and public health officials. Because of the indications from the evidence thus far available the medical profession should be immediately interested and keep informed as to the progress of further research."

(Continued on Page 54)

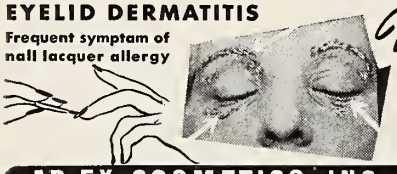
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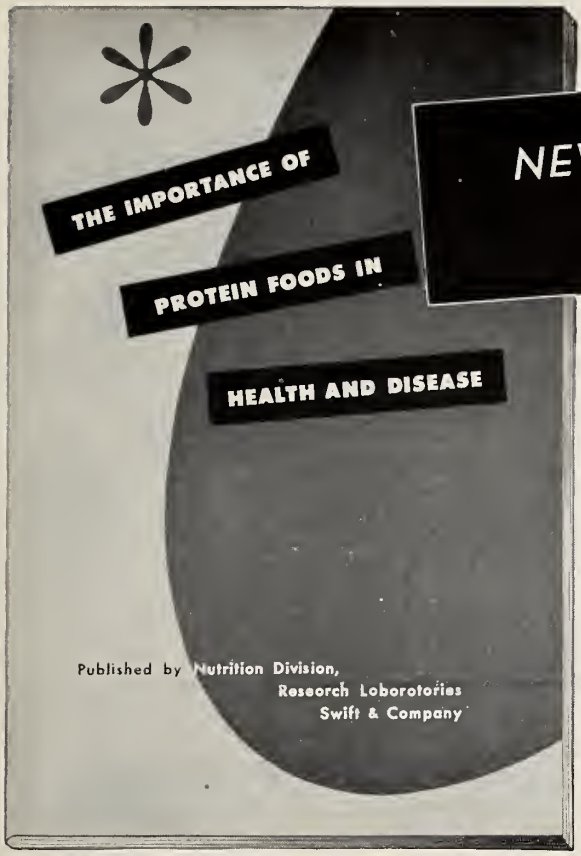
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PRODUCT USED TO BLEACH MOST WHITE FLOUR GIVES DOGS FITS

(Continued from Page 52)

A letter sent by the Food and Nutrition Board of the National Research Council to Dr. Paul B. Dunbar, Washington, D.C., Commissioner of Foods and Drugs, also appears in *The Journal*. The Board feels that the following course should be followed:

1. "Investigations should be continued to isolate and identify the toxic product(s) involved, to determine more conclusively whether human beings are in some degree susceptible, to determine precisely the toxic dosage for those species which are susceptible and to develop a method for quantitative determination of the toxic substance for flour inspection purposes.

2. "Alternative processes of flour treatment, especially with chlorine or chlorine dioxide, should be thoroughly explored to make certain that flour so treated is free from toxic effects.

3. "Development of preferred alternative processes should be encouraged so that suitable commercial equipment and controls may be made available to mills as early as possible. The Board recognizes that extensive engineering efforts are being made to overcome difficulties in the application of chlorine dioxide to flour, and according to present reports many months of work may be required for a satisfactory solution of this phase of the problem.

4. "In the meantime, there should be reduction of the use of agene. It should be employed only on

(Continued on Page 58)

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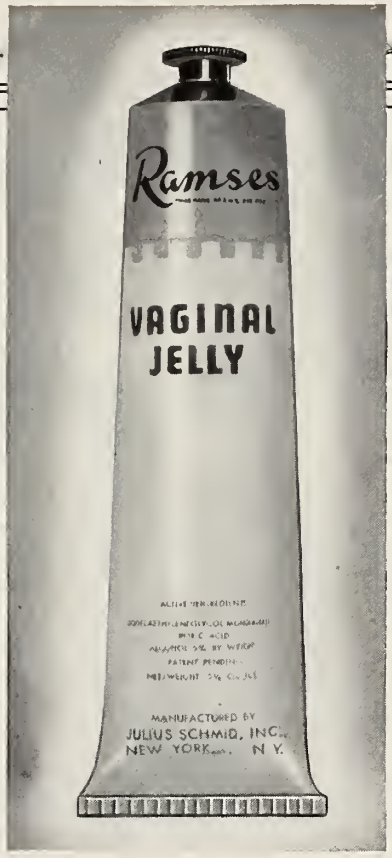
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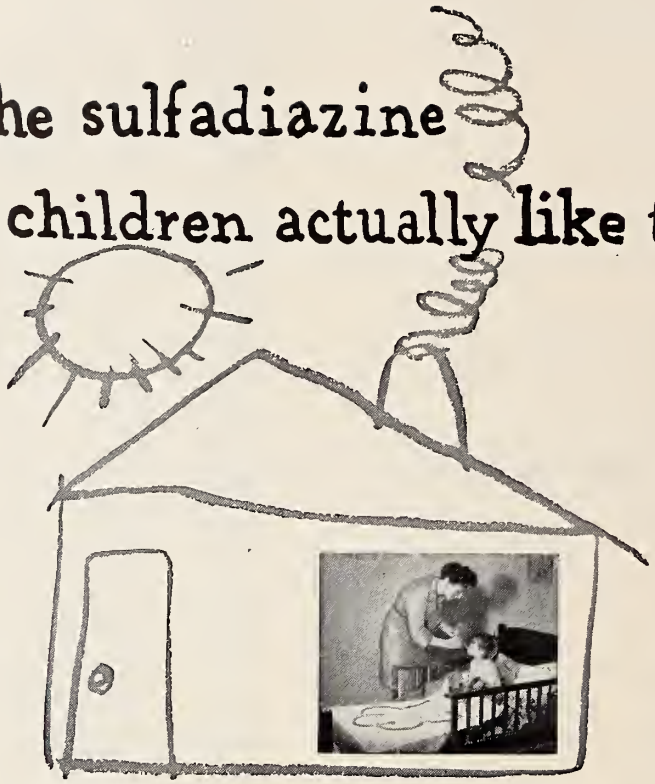
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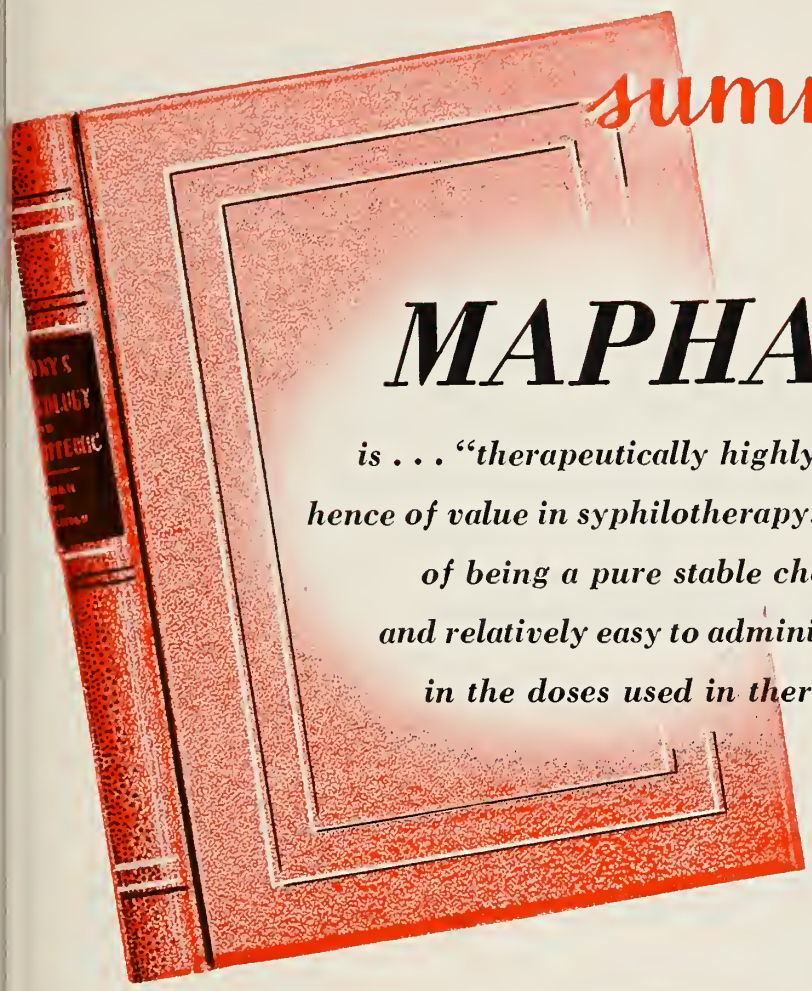
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*Am. J. M. Sc. 210:141, 1945

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*Cushny, A. R.: Pharmacology and Therapeutics, 13th Ed., Lea & Febiger, Philadelphia, 1947, p. 183.

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PRODUCT USED TO BLEACH MOST WHITE FLOUR GIVES DOGS FITS

(Continued from Page 54)

such varieties and lots of wheat as may require it, and in all cases of its use the amount of nitrogen trichloride applied per unit weight of flour should be restricted to the minimum consistent with a product which can be used satisfactorily in bakeries.

"The Board considers that the present food crisis might be aggravated by a more drastic and immediate restriction of familiar practice at this time. It might decrease output of bakeries, increase costs because of new technical difficulties, or waste flour by spoilage of batches in the bakeshop."

REPORT GOOD RESULTS IN PEPTIC ULCER BY CUTTING VAGUS NERVES

(Continued from Page 44)

"Vagus nerve section may one day have a definite place in the therapy of peptic ulcers; however, the period of observation has been too short for final deductions."

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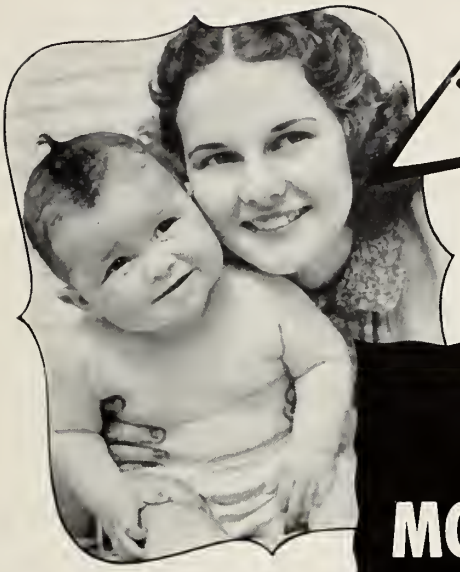
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NEED PUBLIC'S HELP IN CANCER EDUCATION, SERVICE, RESEARCH

"The cancer problem from the public's point of view should be everybody's problem," writes John J. Morton, M.D., a member of the Department of Surgery of the University of Rochester School of Medicine and Dentistry, New York, in a recent issue of *The Journal of the American Medical Association.*

Dr. Morton's article is the first of a series on the various aspects of cancer, each written by a different specialist, which will appear in *The Journal.* When complete, the series will be published under the sponsorship of the American Medical Association and the American Cancer Society in book form by the W. B. Saunders Company. It was developed under the sponsorship of an editorial committee consisting of Drs. Charles A. Doan, Columbus, Ohio; Ludvig Hektoen, Chicago; James R. Miller, Hartford, Conn.; Eugene P. Pendergrass, Philadelphia, and Allen O. Whipple, New York, in cooperation with Dr. Morris Fishbein, Chicago, editor of *The Journal,* and Drs. A. W. Oughterson and Charles S. Cameron of the American Cancer Society, New York.

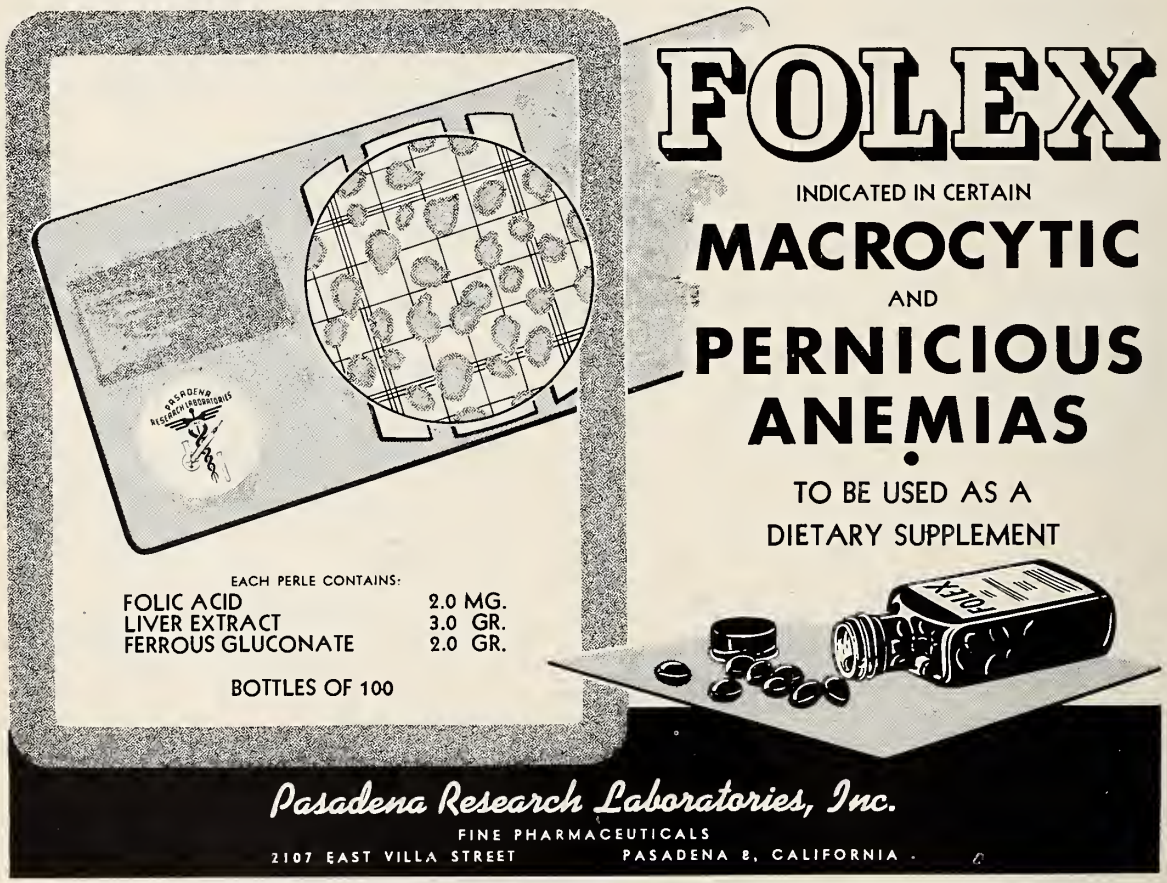
The articles of which Dr. Morton's is the first are designed to aid the general practitioner in the early diagnosis of cancer and to guide him in the selection of the correct technic of treatment. But, Dr. Morton observes, the public has work to do as well as the physician and the scientist.

"The public must become cancer conscious," he says. "It must approach this problem in a rational manner. It must recognize that there is a job to do. Few Americans have ever quit in such circumstances. The physicians of America have launched a crusade to learn more about cancer. They need the help of the public for education, for service and for research. They need the intelligent cooperation of everybody.

"The people of the country must see to it that their physicians examine them for cancer. They must make it possible for the physicians to organize cancer detection or well person centers in their communities where examinations can be made. They must provide adequate equipment. They must help in the care of those who have the disease. They must see to the comfort of those who cannot be cured. They must make it possible for young scientists to train themselves to find out the causes of cancer. They must see to it that fanatics do not hinder these scientists by making animal experimentation difficult or impossible. The public should be so anxious to solve the riddle of cancer that every possible lead should be followed no matter what the cost.

"The life of man is short. The acquisition of knowledge takes a long time. The technics of treating cancer even as imperfectly as it is now treated require years of hard study—averaging 10 for a general physician and 15 for a specialist, at a salary scale that would not interest an ordinary laborer. The finest young scientists of America have always worked for a pittance and many have left the field of cancer research because they could not afford to stay in it. America—the public—should be ashamed

(Continued on Page 62)



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NEED PUBLIC'S HELP IN CANCER EDUCATION, SERVICE, RESEARCH

(Continued from Page 60)

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"The public has responded magnificently to the appeal for cancer funds. The money has been well spent. The country is large and much more is needed. Progress will be slow because the problem of cancer is not an easy one.

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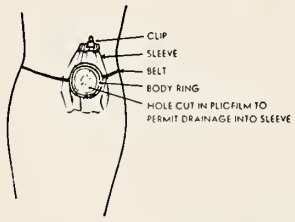
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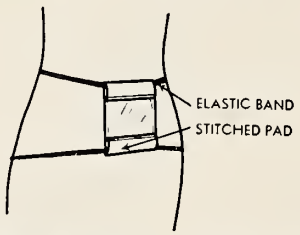
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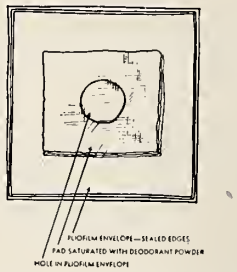
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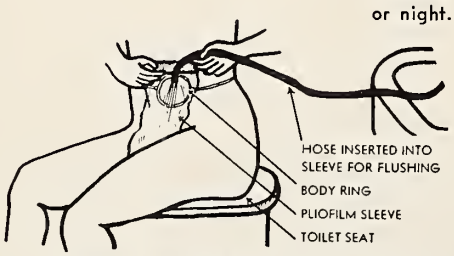
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ADVERTISERS

A-1 Nurses Registry 46
Abbott Laboratories 18
Acme Breweries 17
Alexander Sanatorium, Inc., The 34
Alum Rock Sanatorium 52
American Ambulance Co. 16
American Meat Institute 35
Ames Company, Inc. 10
Ar-Ex Cosmetics, Inc. 16
Ayerst, McKenna & Harrison Limited 31

Barnes-Hind Laboratories 36
Benjamin, M. J. 3
Bilhuber-Knoll Corp. 54
Bolin, M.D., Zera E., Pathologist 24
Borcherdt Malt Extract Company 54
Borden Company, The 27
Broemmel's Pharmaceuticals 13
Burroughs Wellcome & Co. 51

California Sanatorium, The 12
Camp and Company, S. H. 66
Carhart Manufacturing Co. 34
Ciba Pharmaceutical Products, Inc. 1, 39
Classified Advertisements 8
Colfax Hospital for the Tuberculous 26
College of Medical Evangelists 64
Commercial Solvents Corporation 47
Compton Sanitarium 36
Cook County Graduate School of Medicine 52
Cutter Laboratories 30, 4th Cover

Devereux Schools 16
Doctors Business Bureau, The 62

Fleet & Co., Inc., C. B. 43

Garden Grove Sanitarium 42
Greens' Eye Hospital 7

Haack Laboratories, Inc. 20
Hanger, Inc., J. E. 24
Hardaker, Lorne H., Photography 44
Hittenberger Co., C. H. 56
Hygeia Sanatorium 20

Ingram Laboratories, Inc. 50
International Pharmaceutical Corporation 38
Invenex Laboratories, Inc. 7

Kennolyn Camp 64
King Ambulance Company 17
Kip Corp., Ltd. 46

Las Encinas Sanitarium 62
Lilly and Company, Eli Insert 32
Livermore Sanitarium 46
Los Angeles Tumor Institute 58
Lov-e Brassiere Company 32

McCall's Desert-Air Lamps 60
M & R Dietetic Laboratories, Inc. 2nd Cover
Martin-Parry Corp., Rexair Division 37
Mead Johnson & Co. 3rd Cover
Medical Protective Company, The 65
Merck & Co., Inc. 61
Mosby Company, The C. V. 14

New York Polyclinic, The 24
Noble Placement Agency 17

Officers of the California Medical Association 2, 4, 6

Park Sanitarium 54
Parke, Davis & Company 19, 59
Pasadena Research Laboratories, Inc. 26
Philip Morris & Co., Ltd., Inc. 25
Physicians Casualty Association 52
Piedmont Psychiatric Clinic 44
Pottenger Sanatorium and Clinic, The 56

Raleigh Hills Sanitarium, Inc. 58
Rexall Drug Company 49
Reynolds Tobacco Co., R. J. 55
Riggs Optical Co. 12

Saint Francis Hospital 44
St. Luke's Hospital 36
Sandoz Chemical Works, Inc. 3
Schering Corporation 9
Searle & Co., G. D. 33
Servex, Inc. 60
Shadel Sanitarium 22
Sharp & Dohme 23
Smith-Dorsey Company, The 53
Smith, Kline & French Laboratories 21, 28, 57
Spencer Incorporated 40
Squibb & Sons, E. R. 11
Stacey, Inc., J. W. 56
Stayner Corporation 48
Stuart Oxygen Co. 64

Upjohn Company, The 45

Varick Pharmacal Co., Inc. 63

Walters Surgical Company 29
Walker Vitamin Products Co. 41
Warren-Teed Products Company, The 5
White Laboratories, Inc. Insert 16 and 17
Winthrop-Stearns, Inc. 15

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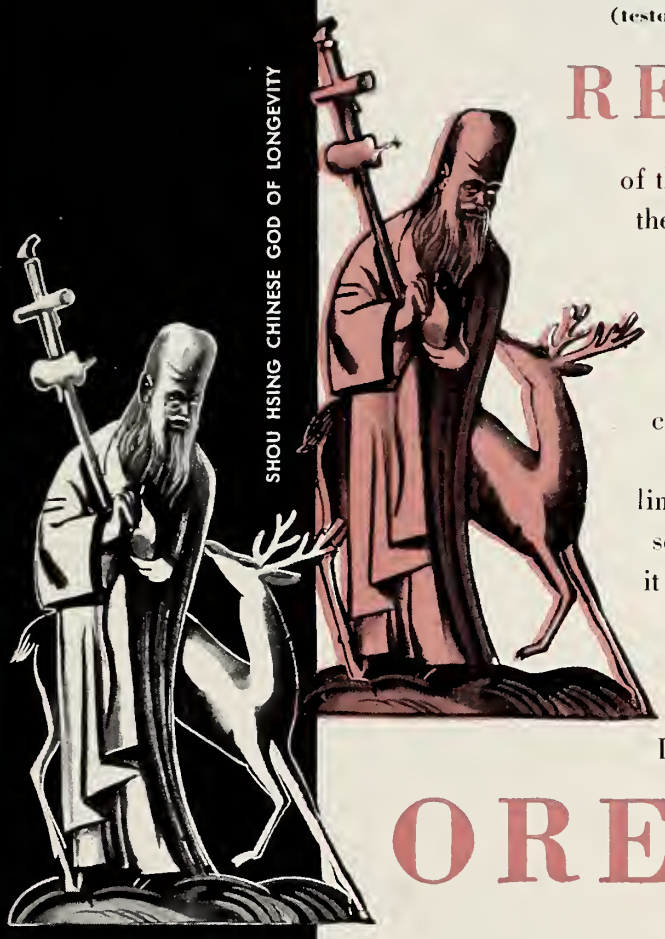
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(Continued in Back Advertising Section, Page 50)

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Bibliography: (1) McCullagh, E. P., and McGurl, F. J.: Endocrinology **26**:377, 1940. (2) Thompson, W. O., and Heckel, N. J.: J.A.M.A. **113**:2124, 1939. (3) Goldzieher, M. A.: Geriatrics **1**:226, 1946.

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2. Haid, W. H.: The Use of Screening Tests in the Clinical Laboratory, J. Amer. Med. Tech., *8:*606-14 (Sept.) 1947.

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ALCOHOLISM DOES NOT PREVENT ATHEROSCLEROSIS, DOCTOR FINDS

In chronic alcoholics, the disease of the blood vessels known as atherosclerosis is considerably less common and less severe than in nonalcoholics. This has set doctors to wondering. In a recent issue of *The Journal of the American Medical Association* a study is reported which seems to refute the theory which many of them have voiced: that substitution of alcohol for a large portion of ordinary foods in the diet can in itself affect the development of atherosclerosis.

According to Sigmund L. Wilens, M.D., New York, from the Department of Laboratories, Bellevue Hospital, and the Department of Pathology, New York University College of Medicine, "the low incidence of atherosclerosis and associated lesions in chronic alcoholism depends on (1) the relatively young age at which persons with chronic alcoholism die and (2) the low incidence of association with conditions that favor the development of this disease such as hypertension, diabetes and obesity."

Dr. Wilens bases his conclusion on a comparison of 519 chronic alcoholics who were 35 years or older at death, studied at necropsy at Bellevue, with a control group of 600 consecutive necropsies of nonalcoholics, also 35 years or older.

Atherosclerosis is a condition characterized by a thickening of the coats of the arteries, the vessels through which the blood passes from the heart to the various parts of the body, and degeneration of the connective tissue of the arterial walls. Of the nonalcoholics, 64.2 per cent had at least a moderate degree of generalized atherosclerosis; this was true of only 44.7 per cent of the alcoholics, and even in these a severe condition was much less common. Furthermore, lesions that could be attributed to atherosclerosis of the coronary and cerebral arteries were only one-half to one-third as common in the alcoholics as in the controls.

However, Dr. Wilens points to the following facts:

—Three-fourths of both men and women of the control series were 55 years of age or older at death. Only one-half of the alcoholic men and one-fourth of the alcoholic women survived beyond the age of 55, when atherosclerosis is most likely to develop.

—Hypertension, or chronic high blood pressure, which is a factor in the development of atherosclerosis, was rarer in the alcoholics.

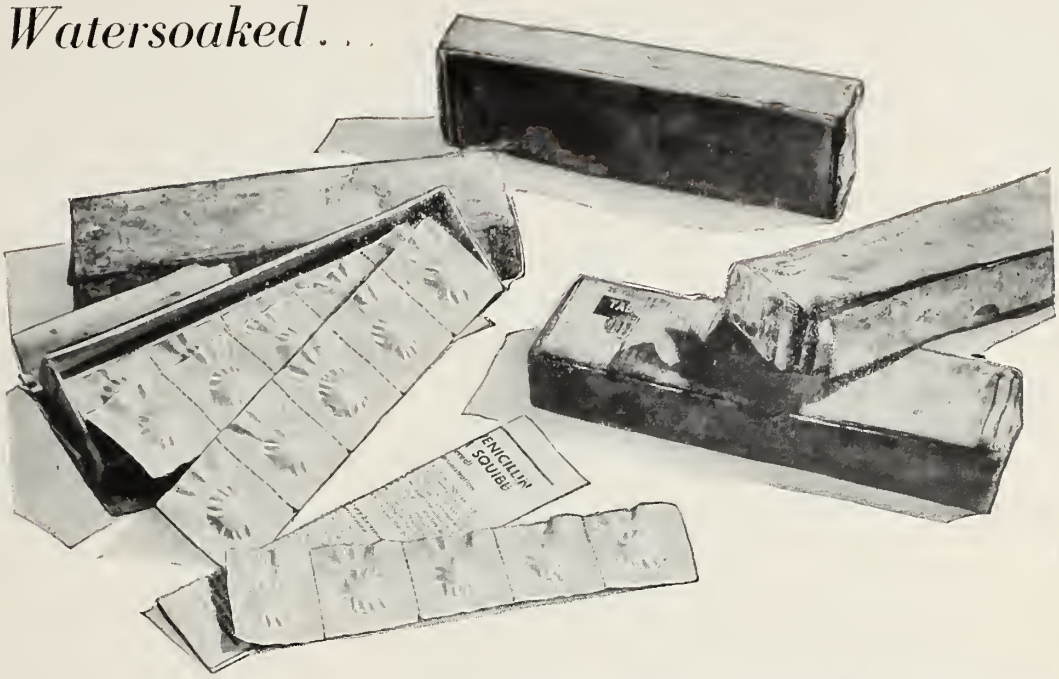
—If only those without hypertension in each group were compared, atherosclerosis was actually more common in the alcoholic than in the nonalcoholic group. This could be explained by the fact that underweight persons, who are less likely to develop atherosclerosis, were more numerous among the nonalcoholics. (A pint of whiskey alone provides about 1,750 calories.)

—If only those with hypertension in each group were compared, atherosclerosis was more common in the nonalcoholics than in the alcoholics. This could be explained by the fact that obese persons were also more numerous in the nonalcoholic series. (Chronic alcoholics as a group are maintained on low fat and protein diets.)

"It may therefore be concluded," Dr. Wilens

(Continued on Page 12)

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The Biographical-Directory Department of the American Medical Association was established in 1905 and the first edition of the American Medical Directory was published in 1906, listing 121,484 physicians in the United States and 6,689, in the U. S. dependencies and Canada. Today there are nearly 200,000 living physicians listed in its records.

The Council on Medical Education and Hospitals of the American Medical Association maintains a list of 79 approved four year medical schools and eight approved schools of the basic medical sciences in the United States and Canada in which more than 23,000 students are enrolled.

ALCOHOLISM DOES NOT PREVENT ATHEROSCLEROSIS, DOCTOR FINDS

(Continued from Page 10)

writes, "that differences in incidence of atherosclerosis observed in alcoholic and nonalcoholic groups at necropsy are not the result of alcoholism per se but are attributable to associated differences in age, blood pressure and nutrition."

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1948 ANNUAL SESSION
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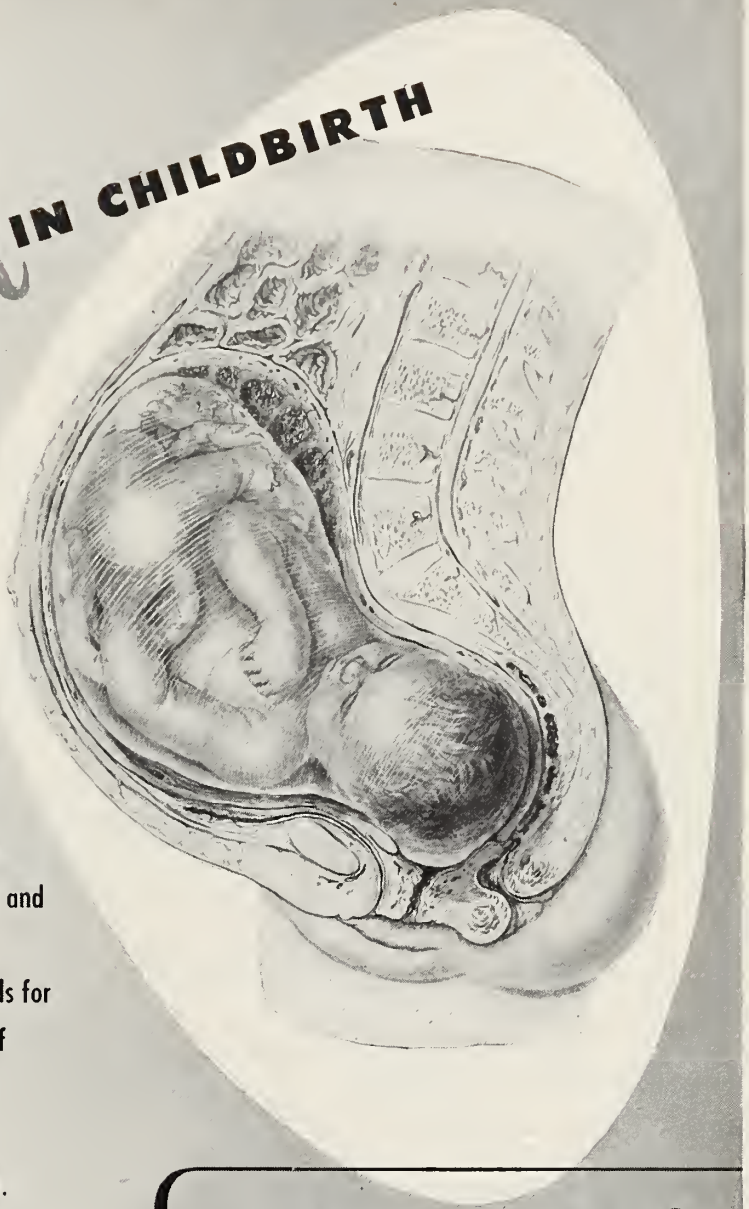
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For detailed discussion, see Alfred C. Beck: Obstetrical Practice. Baltimore, Williams and Wilkins Co., 4th ed., 1947, page 403.

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MORE CANCERS FOUND AT DETECTION CENTERS THAN EXPECTED

A nine-months' survey of cancer detection centers in one state shows that 10 to 15 times as many cancers are being discovered in male examinees, and twice as many in females, as would be expected from the general cancer prevalence rates by sex and age. These facts are revealed in a report by Howard W. Jones, Jr., M.D., and W. Ross Cameron, M.D., Baltimore, in a recent issue of *The Journal of the American Medical Association*.

The two doctors state that from November 1, 1946 to July 31, 1947 a total of 1,709 persons were examined in cancer detection centers in Maryland, 336 being men and 1,373 women. By means of the expected prevalence and detectability rates only 0.56 case of cancer would have been anticipated in the male and 4.9 cases in the female examinees. Actually eight cancers were found among the men and nine among the women.

Although a cancer detection center represents a case-finding clinic to which only persons who are free from cancer symptoms are supposed to be admitted for examination, the writers suggest that a high proportion of the patients come to such centers because of minor complaints or because of the occurrence of cancer in their immediate families. They are therefore not a true cross section of the population as a whole.

"An incidental, but important finding," the doctors also write, "was that 36 per cent of men and 51 per cent of women examinees were referred to their physician because medical or surgical conditions other than cancer were discovered."

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SKIN COMPLAINTS OFTEN FIRST SIGNS OF UNDERLYING MENTAL DISEASE

Certain skin complaints often are among the first signs of an underlying mental disease, according to two Chicago doctors, Theodore Cornbleet, M.D., and Meyer Brown, M.D., from the Department of Dermatology of the University of Illinois College of Medicine and the Department of Nervous and Mental Diseases of Northwestern University Medical School.

Writing in a recent issue of *The Journal of the American Medical Association*, the writers observe that disturbed sensations of the skin which cannot be traced to any rational source should always be suspected. Some of the most common of these are intense itching which develops suddenly, a feeling of numbness, tingling, burning, drawing, heat or cold, a sensation of insects crawling or of droplets falling on the skin.

An actual skin disorder may sometimes be accounted for by excessive washing or cleansing of the skin which springs from a delusional idea, the doctors point out. Unreasonable concern over the appearance of some simple condition such as a few additional facial hairs or moles or increased dryness or oiliness of the skin, as well as complete indifference to serious skin disease, also may indicate that a psychiatrist's services are needed. Excessive sweating, feelings of warmth, blanching or flushing or blushing may or may not be part of a set of psychiatric symptoms. More obvious are bizarre delusions involving the skin and self-induced injuries.

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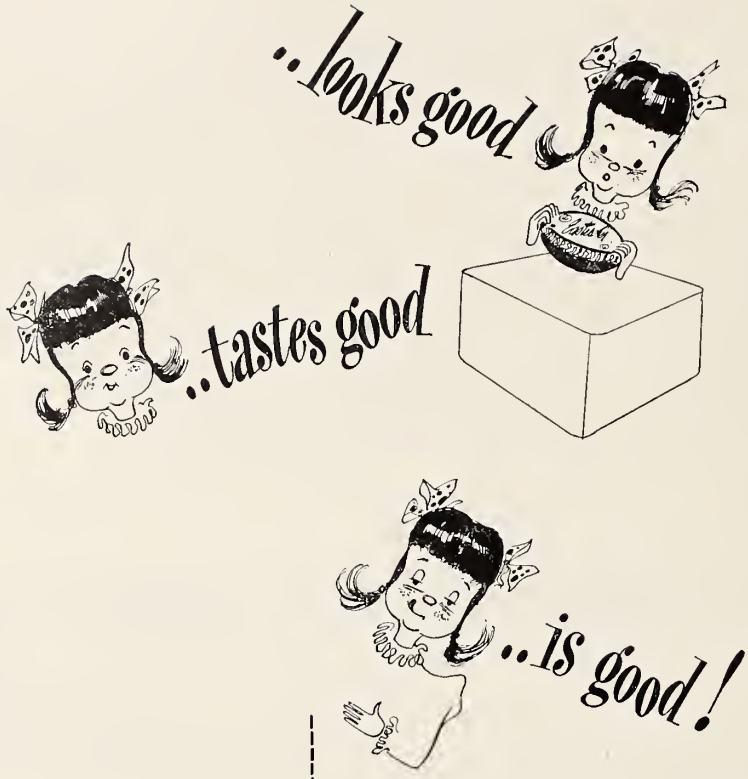
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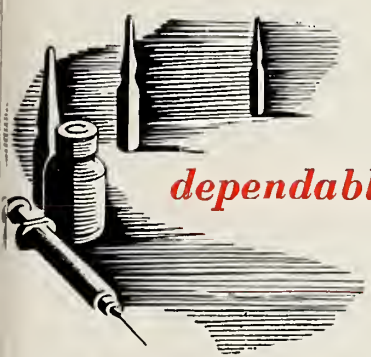
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A.M.A. TAKES POSITIVE ACTION IN PROVIDING HEALTH SERVICES

American ideals of freedom "will be most certainly maintained when the needs of the American people for medical service are met on a local community and state basis rather than on a system centrally controlled," states an editorial in a recent issue of *The Journal of the American Medical Association.*

The editorial follows:

In his address to the Congress, made January 7, President Harry S. Truman stated his objectives in the field of health in the following quotations:

> The greatest gap in our social security structure is the lack of adequate provision for the nation's health. We are rightly proud of the high standards of medical care we know how to provide in the United States. The fact is, however, that most of our people cannot afford to pay for the care they need.
>
> I have often and strongly urged that this condition demands a national health program. The heart of the program must be a national system of payment for medical care based on well tried insurance principles. This great nation cannot afford to allow its citizens to suffer needlessly from the lack of proper medical care. Our ultimate aim must be a comprehensive insurance system to protect all our people equally against insecurity and ill health.

Then, following a discussion of education, he continued:

> The government's programs for health, education and security are of such great importance to our democracy that we should now establish an executive department for their administration.

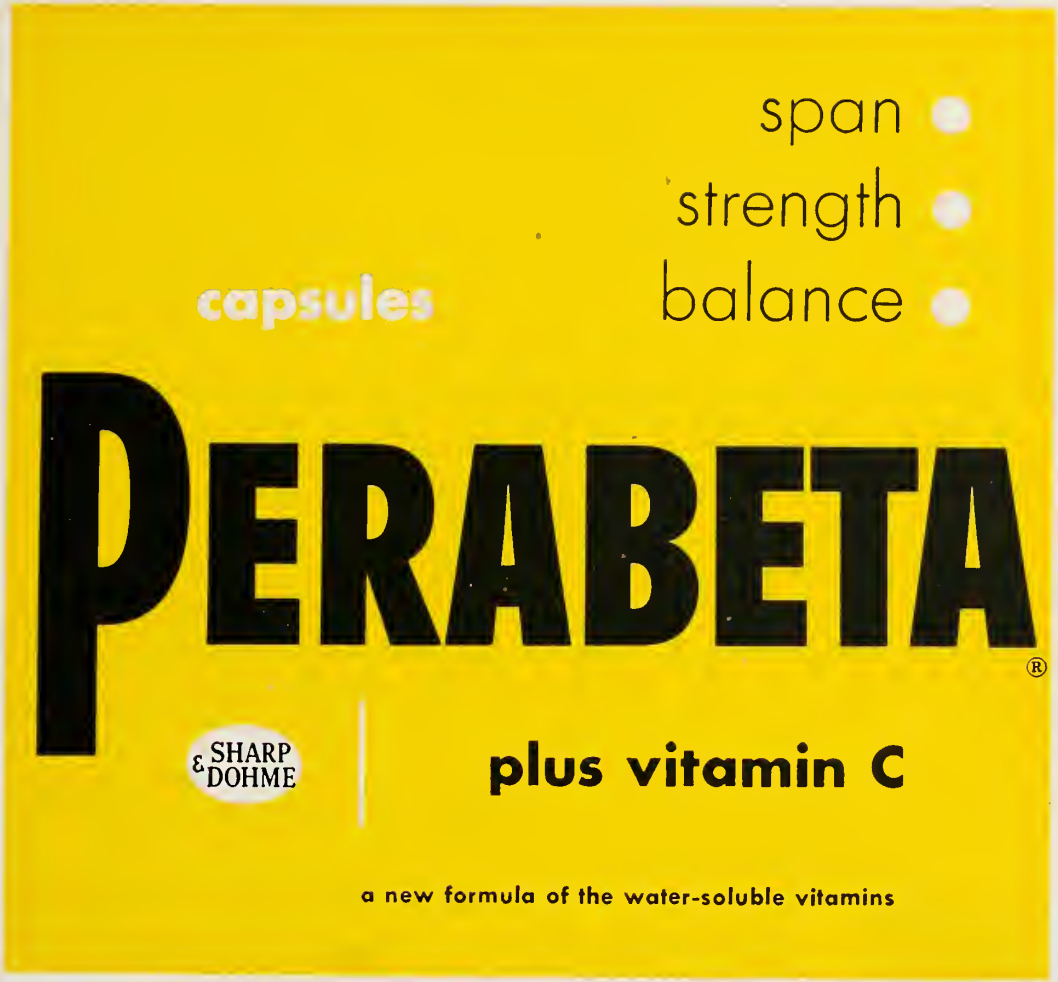
(Continued on Page 24)

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1. Spies, T.D., & Stone, R.E.: Southern Med. J. *40*:46, 1947. 2. Registered trademark, Sharp & Dohme. 3. Jolliffe, N.: J.A.M.A., *129*:613, 1945.

PERABETA

A.M.A. TAKES POSITIVE ACTION IN PROVIDING HEALTH SERVICES

(Continued from Page 20)

In the meeting of the house of delegates last week in Cleveland, the American Medical Association, through this policy-making body, reaffirmed its point of view in opposition to compulsory sickness insurance. The house of delegates received from the board of trustees a detailed statement indicating the progress that has been made toward achieving the objectives of the association's own 10 point national health program. Specifically, the ideals of freedom to which President Truman referred will be most certainly maintained when the needs of the American people for medical service are met on a local community and state basis rather than on a system centrally controlled.

Many millions of our citizens and their families are already protected against the cost of hospitalization and sickness by the Blue Cross Plans, the nonprofit voluntary plans for paying the costs of medical care, and the long established private insurance companies. Already the American people are far on the way toward meeting the President's standard of "a national system of payment for medical care based on well tried insurance principles." These are not, however, "compulsory." The President was apparently careful to avoid that odious word in his presentation, although he used it frequently in his

(Continued on Page 26)

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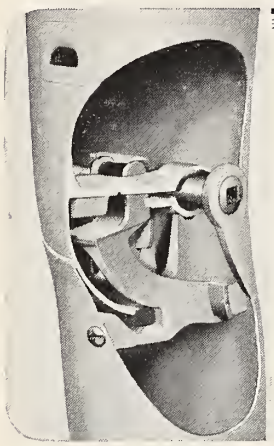
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**Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154; Laryngoscope, Jan. 1937, Vol. XLVII, No. 1, 58-60; Proc. Soc. Exp. Biol. and Med., 1934, 32, 241; N. Y. State Journ. Med., Vol. 35, 6-1-35, No. 11, 590-592.*

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A.M.A. TAKES POSITIVE ACTION IN PROVIDING HEALTH SERVICES

(Continued from Page 24)

previous message on health. There is not the slightest evidence that he has departed from his previous insistence on compulsory sickness insurance, federally administered, as his answer to the sickness problem.

Through its national health program, the American Medical Association is furthering the advancement of medical science by research, by the improvement of industrial health, by better and more widely available medical education, by the expansion of preventive medical services, by the fostering of new hospitals and health centers, and in many other ways. The answer of the medical profession has not been made in words alone but in positive action.

For many years the medical profession has favored assembling and coordinating all the health functions of our national government in a single agency with an administrative head in the cabinet. Apparently the President anticipates the enactment of legislation which will combine health, education and security in one federal department. Whether or not any or all of these would suffer in such a system remains to be seen. If health is, indeed, as many a great statesman has asserted, the first consideration of government, medicine as the profession responsible for this function of our civilization should not be asked to play a subsidiary role.

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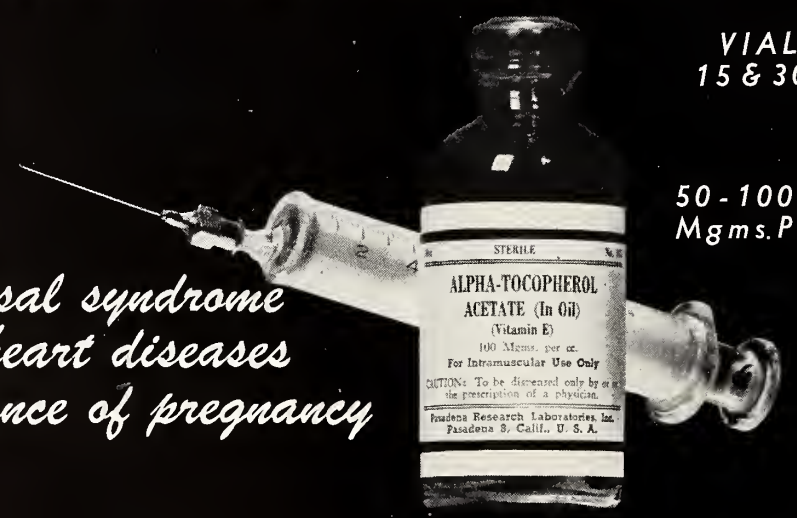
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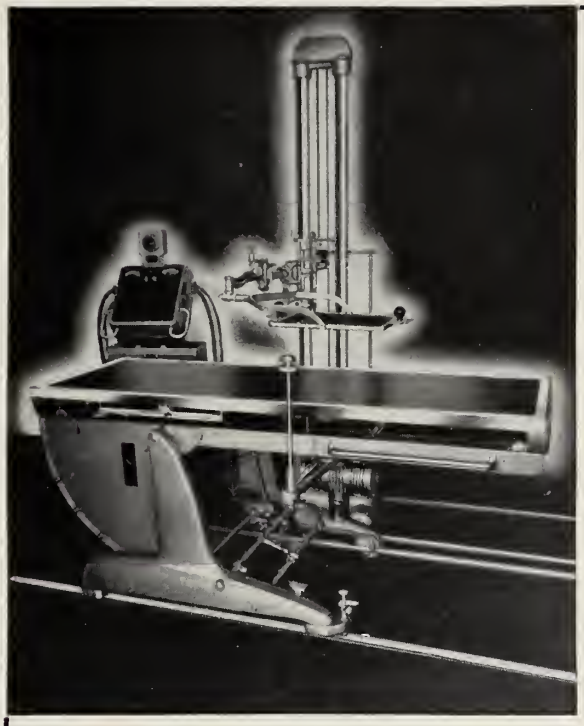
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By the way, our statistics hounds have turned up some interesting figures on measles incidence —based on a study of U.S. Public Health reported cases, 1935-45. Did you realize, for instance, that 60% of all measles occur in the 12-week period, March through May?

But you're probably busy enough with those cases you have right now — and one measly column can't cover the whole story — so more next time.

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A.M.A. DEMANDS HOUSECLEANING OF DOCTORS WHO ACCEPT KICKBACKS

In an editorial appearing in a recent issue of *The Journal of the American Medical Association*, the board of trustees of the A.M.A. calls upon leaders of the medical profession to act promptly in ridding the medical profession of physicians who accept rebates, kickbacks and commissions.

The editorial follows:

The pride of medicine as a profession has always been its freedom from the taint of barter and trade in the sick patient. Physicians must give their wholehearted devotion to the care of the patient; no other objective must be given precedence over considerations of the patient's need. Nevertheless, the charge is made that some physicians have forgotten the ethical principles that prevail in the relationship between doctor and patient and have selected the surgeon willing to make the greatest division of fees rather than the one best suited to perform the operation. Ophthalmologists have sent the patient for lenses to the optician who returned a proportion of the fee rather than to the optician who rendered the highest quality of optical service. Occasionally orthopedic surgeons and others who utilize the work of the maker of braces, splints and elastic bandages have been willing to accept commissions from such manufacturers and have delegated the procurement of these accessories to the agency offering the largest commission rather than to the one most painstaking in production and most reasonable in price. From time to time criticism has been leveled against pharmacists who have offered commissions to physicians on the prescriptions sent to them and to the physicians who have accepted such commissions. Wherever barter and trade have insinuated their insidious and evil aspects into the practice of medicine, the quality of the service has depreciated. The morals of the physicians and the commercial agencies that deal in these unwholesome profits in this marketing of medical care have already deteriorated.

From the beginning of its entrance on the medical scene, the American Medical Association has fought this menace to the quality of medical service and to the good repute of medical practice. Resolutions have been passed by the official bodies of the association unequivocally condemning such practices. The Judicial Council has repeatedly urged the expulsion or other action against physicians proved to have participated in such procedures. The leaders of surgery, ophthalmology, orthopedic surgery and pharmacy have been unanimous in pointing out the extent to which such commercial considerations may break down the good repute of the specialties concerned. The American College of Surgeons adopted an oath to be taken by its fellows to the effect that they would not participate in the secret division of fees. The Principles of Ethics of the American Medical Association have declared the unethical character of such divisions—direct or indirect.

Now the development of greater complexity in medical practice and in medical relationships has introduced new factors into this problem of barter and trade. The development of roentgenology as an important medical specialty and the establishment of

(Continued in Back Advertising Section, Page 34)

California MEDICINE

OFFICIAL JOURNAL OF THE CALIFORNIA MEDICAL ASSOCIATION
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VOL. 68 MARCH, 1948 NO. 3

Cardiac Calcifications, Annular and Valvular (Leaflet)

CHARLES E. GRAYSON, M.D., *Sacramento*

THE cause of calcareous deposits in the heart valves, either in the leaflets or in the supporting fibrous ring, has been in dispute since Monckeberg's [8] classic description and indication that sclerocalcific and rheumatic changes should be differentiated. Some authors denote aortic calcareous disease as a distinct entity.[5,10,21] Others differentiate between rheumatic and non-rheumatic disease.[3,4,10,12,15,16] Still others feel that all are on a rheumatic basis.[2,6,7,19] Recent studies by Ashworth [1] give considerable weight to the atherosclerotic basis. Ashworth presents the sites of predilection and the factors influencing the production of calcareous deposits.

There appears to be less controversy over the cause of calcareous deposits in the mitral region than in the aortic region. This seems reasonable, if one considers the greater size of the mitral orifice and valve leaflets. Therefore, annular calcifications are distinguishable from leaflet calcifications with greater ease. In either case, early leaflet calcification can be distinguished fluoroscopically from annulus calcifications by conformation and motion.

The differentiation of the location in the annulus or leaflets is of some importance in diagnosis and in prognosis.[2,4,10,14,15,23,27] Proper studies of these calcifications depend on fluoroscopic examination as well as radiographic examination.

Ideally, fluoroscopic examination, for any purpose, should include examination of the lungs and heart. Older patients, and those suspected of heart disease, should have the added search for cardiac calcifications [19] included routinely. Such a search usually consumes only a few seconds of time with the patient in the oblique positions. That the *search* is essential is illustrated by the fact that 70 per cent of those calcifications found in one hospital were seen within a one-year period and 60 per cent by one fluoroscopist. Since so many of these calcifications are not noted during routine fluoroscopy or during fluoroscopy of the heart, the importance of searching for intracardiac calcium deposits should be reemphasized. Greater diagnostic accuracy [10,22] is attained in known and even in unsuspected heart disease.

Fluoroscopy most easily differentiates syphilitic aortic incompetency from aortic calcareous valvular disease. The location of calcareous deposits substantiates clinical diagnosis and helps to indicate the extent and severity of the disease.

Since the first radiographic demonstration of the intracardiac calcifications, in a living individual in 1902,[13] there have been improvements in fluoroscopic equipment and radiographic apparatus. These improvements permit much more detailed studies of these calcium deposits. Such moving shadows can now be demonstrated quite well on film. The technique of fluoroscopy has been well described by Sosman [19] and criteria for special search outlined by him and others.[15] The location and the identification of intracardiac calcifications have been presented also. Incidentally, the study of the motion of these calcifications in living persons has added to the understanding of cardio-dynamics.[9,11,20,26]

Data on those cases seen at the San Francisco City and County Hospital in a four-year period are summarized in Table 1. Several cases seen on the same service and already reported elsewhere [14,15,24,25] are included for statistical reasons. Different age and sex incidence reported by others [3,4,6,10,16,17] may reflect differences in their material as well as the amount of attention given calcifications incidentally in routine examinations.

There are several noteworthy findings. The average age of females with calcifications is consistently

Read before the sections on Radiology, General Medicine, General Surgery, and General Practice at the 76th Annual Session of the California Medical Association in Los Angeles, April 30-May 3, 1947.

From the Stanford University School of Medicine, Department of Radiology, at San Francisco Hospital.

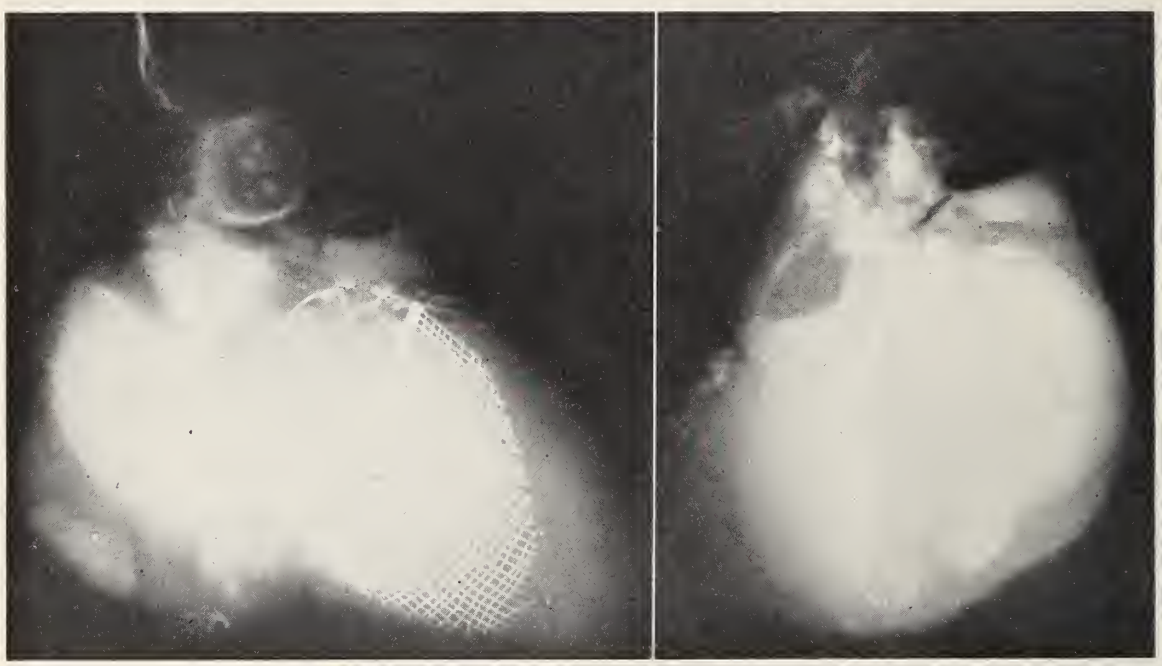
Table 1.

Calcium	No.	Sex M.	Sex F.	Age (Av.)	R.F.	S.	H.	CA	CB	EKG N.	EKG A.	EKG M
Aortic leaflets	16	13		55	4	2	4	3	1	2	10	16
			3	58								
Aortic ring	9	5		67	0	2	1	4	1	1	3	9
			4	64								
Mitral leaflet	5	3		41	5	0	1	0	0	0	5	5
			2	49								
Mitral ring	30	13		67	3	3	14	16	8	3	15	15
			17	71								
Aortic and mitral rings	7	3		65	2	1	4	5	3	0	7	7
			4	73								
Between aortic and mitral areas (Septal)	2		2	80	0	0	1			0	2	1

R.F.—History of rheumatic fever. S.—Syphilis. H.—Hypertension. CA.—Visible calcification in other arteries. CB.—Visible calcification in bronchial tree. N.—Normal electrocardiograph. A.—Abnormal electrocardiograph. M.—Murmur present.

greater than that of males, except in the group with aortic ring calcifications. Three patients showed both leaflet and ring calcification in the aortic region. These were in a younger age group and are included in the group of leaflet calcifications only. The average age of patients having ring calcifications is greater than that of those having leaflet calcifications. If the group with aortic ring and mitral ring calcifications is included in the group of isolated aortic ring calcifications, the average age difference becomes still greater. The average age of patients having mitral leaflet calcifications is considerably lower than the average age of those with calcifications in the mitral annulus. The incidence of hypertension is higher in those cases having mitral, or aortic and mitral, ring calcifications. The association of other visible calcifications in the arteries and in the bronchi is also higher in these groups. The lack of abnormal electrocardiographic findings in aortic calcifications of lesser degree, and in mitral ring calcifications, is consistent with the lack of effect on the heart function. That in the five cases of mitral ring calcification there was no murmur is also not an unexpected finding, since the valve leaflets are usually undistorted. The incidence of rheumatic fever history is considerably higher in both groups of leaflet calcifications.

The appearance of some of these calcium deposits is demonstrated by the following cases. The position of the rings is demonstrated in a heart specimen suspended in the usual oblique projections (Figure 1). The mitral ring or annulus is outlined by a soft wire inserted directly in the fibrous structure. The



A B

Figure 1.—Formalin fixed heart with soft wires in mitral and aortic rings and screen in muscular septum. (a) Right anterior oblique (30°±). (b) Left anterior oblique (60°±).



Figure 2.—Female. Age, 75. Enlarged heart. Clinical diagnosis of mitral stenosis. No history of rheumatic fever. No evidence of syphilis. The view is right anterior oblique. Diffuse calcium in mitral annulus and smaller sharp aortic ring of calcium.



Figure 3.—Male. Age, 62. Cardiac disease. Migratory joint swellings 15 years before. BP-170/95. Systolic and diastolic murmur at apex. EKG—auricular fibrillation. The view is left lateral with projection cephalad. Note aortic cusps distinctly outlined.

aortic ring is similarly outlined by a soft wire inserted in the wall of the aorta about one-half way between the commissures and the sinuses of the aortic cusps. The soft wire screen is placed directly in the muscular septum. The coronary arteries are already outlined by the calcareous plaques.

The aortic and mitral rings are demonstrated in vivo by very short exposure radiograms (Figure 2). The short exposure is possible when high current, high voltage and short distance between the anode and the patient are used. The contrast is increased by using a cone to limit the size of the radiographic beam. In the radiogram, the confusing shadows of rib cartilages and lung markings, easily distinguished fluoroscopically, are too well demonstrated.

Aortic ring calcifications may occur alone with heart disease. As in the mitral ring, the configuration is more regular and is smaller. The position is more anterior in the middle third of the heart shadow.

Some aortic leaflet calcifications are observed incidental to gastrointestinal examination. The cardiac silhouette may not be abnormal. A small fluorogram for permanent record is easily made at the time of the examination.

That the disease is of greater extent than the calcareous deposits becomes obvious when one considers those cases presenting mitral signs with calcium in the aortic leaflets only (Figure 3).

Reich's [10] prognostic evaluation in the presence of aortic valve calcification can be observed in Figure 4. In 18 months, there was marked failure ending with death. The aortic calcifications were particularly heavy and extensive. In such an instance, the difficulty of distinguishing the origin of the calcium in the aortic ring or cusps arises.



Figure 4.—Male. Age, 58. Right anterior oblique of heart. Heavy aortic calcium deposit. Autopsy confirmed aortic calcification and stenosis. Mitral valve edges slightly thickened. No histologic evidence of rheumatic heart disease.

Calcifications in the mitral annulus fibrosus are probably of less clinical importance than in the aortic ring.[4,14,15,19,24,27] Such calcifications usually begin

in the central portion of the annulus. The homogeneity and regularity, as well as the position and motion, are identifying characters. Mitral annulus deposits are not infrequently discovered in elderly individuals incidental to gastrointestinal examination. This may account for the observation of frequency of peptic ulcers in this type of lesion.[15] These calcium deposits are rarely visible in the usual chest roentgenogram and the extent of calcium deposition is poorly observed.

Mitral annulus deposits can be entirely unsuspected until the patient is examined under the fluoroscope. In one case (Figure 5), evidence of heart disease was present for only two months, but the calcification undoubtedly had been present for a much longer period. The effects of annulus calcification in the mitral region are usually due to extension of the calcium or of the disease processes into the conduction fibers of the heart.[14,15,27]

Small mitral leaflet calcifications are distinguishable by their snapping motion and by the more localized extent of the deposit. These deposits occur in younger individuals who frequently show associated enlargement of the left auricle (Figure 6). The history of rheumatic fever is more frequently elicited. The distinct triangular outline of the deformed valve can occasionally be observed.

SUMMARY

A brief discussion of calcareous deposits in aortic and mitral annulus and in the valve leaflets is presented. The appearance of some of these deposits is demonstrated. Many of these will not be seen unless searched for specifically. Fluoroscopic examination offers a means of more accurate observation and a much higher frequency of discovery of minimal or early deposits.

It seems clear that the deposits are due to more than one disease process. The annular type occurs in older people and is probably related to an atherosclerotic process. The leaflet type occurs in younger people and is probably related to rheumatic heart disease. Since fluoroscopy permits distinction between annular and leaflet calcification, one has an additional aid in distinguishing rheumatic from non-rheumatic heart disease.

REFERENCES

1. Ashworth, C. T.: Atherosclerotic valvular disease of the heart, Arch. Path., 42:285-298 (Sept.), 1946.

2. Dry, T. J., and Willius, F. A.: Calcareous disease of aortic valve, Am. Heart Journal, 17:138-157 (Feb.), 1939.

3. Epstein, B. S.: Comparative study of valvular calcifications in rheumatic and non-rheumatic heart disease, Arch. Int. Med., 65:279-290 (Feb.), 1940.

4. Epstein, B. S.: The roentgenologic differentiation of rheumatic from non-rheumatic mitral valve calcifications, Am. Journal Roentgenol. and Rad. Therapy, 44:704-708 (Nov.), 1940.

5. Friedberg, C. K., and Sohval, A. R.: Non-rheumatic calcific aortic stenosis, Am. Heart J., 17:452-469 (April), 1939.

6. Hall, E. M., and Ichioka, T.: Etiology of calcified nodular aortic stenosis, Am. J. Path., 16:761-786 (Nov.), 1940.

7. Karsner, H. T.: Calcific disease of aortic valve, Proc. Inst. Med., Chicago, 15:62-65 (Mar. 15), 1944.

8. Monckeberg, J. G.: Der Normale Histologische Bau und die Sklerose der Aortenklappen, Virchow's Arch. f. Path. Anat., 176:472-514, 1904.

9. Odquist, H.: Roentgen aspects of intracardiac calcifications, especially perimitral calcifications, Acta. Radiol., 25:686-700, 1944.

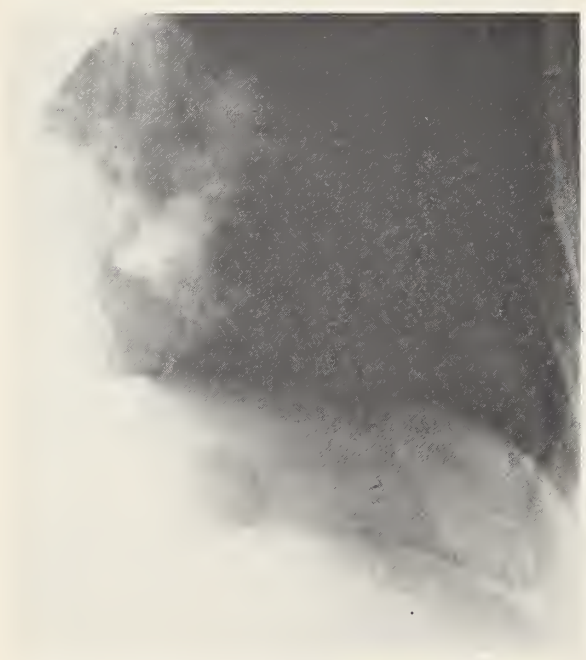


Figure 5.—Female. Age, 56. Heart enlarged in all directions. Heavy calcium in mitral annulus (also present in aorta and bronchi). BP—180/78. Systolic murmur over precordium and apical mid-diastolic murmur. EKG—2:1 atrio-ventricular block.



Figure 6.—Male. Age, 39. Congestive failure. Migratory polyarthritis at age 29. Right anterior oblique of heart. Triangular calcium deposit in posterior mitral leaflet. Prominence of left auricle higher than usual above diaphragm.

10. Reich, N. E.: Calcific aortic valve stenosis: a clinico-pathologic correlation of twenty-two cases, Ann. Int. Med., 22:234-251 (Feb.), 1945.

11. Rigler, L. G.: Roentgen kymography in demonstration of calcified valves of the heart, Am. J. Roentgenol. and Rad. Therapy, 47:480-482 (Mar.), 1942.

12. Rosenthal, J., and Feigin, I.: Pathology of the mitral valve in the older age groups, Am. Heart J., 33:346-361 (Mar.), 1947.

13. Rudis-Jicinsky, J.: Skiagraphy as an art, Tr. Am. Roentgen Ray Soc., 3:57-65, 1902.

14. Rytand, D. A.: An auricular diastolic murmur with heart block in elderly patients, Am. Heart J., 32:579-598 (Nov.), 1946.

15. Rytand, D. A., and Lipsitch, L. S.: Clinical aspects of calcification of the mitral annulus fibrosus, Arch. Int. Med., 78:544-564 (Nov.), 1946.

16. Sophian, L. H.: Calcific aortic valvular stenosis, Am. J. Med. Sc., 210:644-652 (Nov.), 1946.

17. Sosman, M. C., and Wosika, P. H.: Calcification in aortic and mitral valves, Am. J. Roentgenol. and Rad. Therapy, 30:328-348 (Sept.), 1933.

18. Sosman, M. C., and Wosika, P. H.: The position of the heart valves and their relation to the anterior chest wall in living subjects with abnormal hearts, Am. Heart J., 10:156-162 (Dec.), 1934.

19. Sosman, M. C.: The technique for locating and identifying pericardial and intracardiac calcifications, Am. J. Roentgenol. and Rad. Therapy, 50:461-468 (Oct.), 1943.

20. Sundberg, C. G.: Kymographic study of a heart with calcified annulus fibrosus, Acta. Radiol., 22:834-840, 1941.

21. Texon, M.: Calcific aortic stenosis, a clinical entity, New England J. Med., 220:992-997 (June 15), 1939.

22. Walk, L.: How exact is the diagnosis of heart valve calcifications?, Am. J. Roentgenol. and Rad. Therapy, 56:500 (Oct.), 1946.

23. Willius, F. A.: Clinical diagnosis of mild grades of calcareous stenosis of the aortic valve, Proc. Staff Meet. Mayo Clinic, 18:259-261 (July 28), 1943.

24. Windholz, F., and Grayson, C. E.: Roentgen demonstration of calcifications in the interventricular septum in cases of heart block, Am. J. Radiol. and Rad. Therapy, in press.

25. Windholz, F., and Grayson, C. E.: Intrusion of the aortic root into mitral orifice in hypertensive disease; radiological observations in living persons, Am. Heart J., in press.

26. Wolferth, C. C., and Margolies, A.: Movements of roentgen opaque deposits in heart valve areas, Am. J. Med. Sc., 197:197-201, 1939.

27. Yater, W. M., and Cornell, V. H.: Heart block due to calcareous lesions of the bundle of His. Review and report of a case with detailed histopathologic study, Ann. Int. Med., 8:777-789 (Jan.), 1935.

Roentgen Cardiac Kymography: Electrocardiographic Correlation

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THE purpose of this paper is to re-evaluate the roentgen cardiac kymogram and to demonstrate that the kymogram sometimes gives information which is not obtainable by any other means.

INTRODUCTION

Single slit roentgen kymography was introduced by Sabat in 1911.[5] Crane,[1] in 1916, published the first American paper dealing with the use of the method. Since that time, one major improvement has been made, the perfection of the multiple slit kymograph by Stumpf in 1928.[9] Hirsch[4] published his first paper on the use of this instrument in this country in 1934. There has been considerable work on the application of this type of kymograph; but, in the past few years, little has been added to the literature by way of evaluation of this particular method of examination and it is felt that reconsideration at this time would be worth while, especially as we feel much as Schwedel[7] does: "Roentgenkymography has made definite contributions to cardiac roentgenology. It makes possible a permanent record of cardiac motion. It permits analysis of the pulsations of the heart and the great vessels as to amplitude and time. . . . Like all newer methods, roentgenkymography has gone through an initial period of exploitation and exaggerated claims, and, currently, it has largely fallen into disuse. But in the coming years this method will no doubt be more adequately evaluated on the basis of its actual usefulness in cardiac roentgenology."

The kymograph, which was used in this work, was of a conventional type, with 0.4 mm. slits in a lead plate, and a film excursion of 12 mm. The obvious usefulness of this multiple slit machine over the single slit is that it allowed a complete study of the whole organ simultaneously. The other advantage is that one area can be compared with another during the same interval. The single slit method (in some instances) gave a more detailed view of the movement, but it did not allow viewing the organ as a whole, nor did it allow for any cyclic timing of the various parts of an organ. This is especially necessary in cardiac roentgenkymography. The usefulness of the comparison of the waves of the various chambers simultaneously is, of course, obvious. The addition of a timing device for the duration of the exposure is also useful.

TECHNIC

Routinely, exposures of 1½ to 2 seconds were made in mid-inspiration with the patient as relaxed as possible in order to avoid a Valsalva or Müller effect. Films in forced inspiration and expiration were made on occasion to confirm or rule out certain minimal findings. Projections were made in the P.A. position, and in most instances, both oblique positions (RAO 45°; LAO 65°), using a 48 inch distance. The oblique views were desirable to provide projections in other planes and occasionally were necessary to eliminate misleading "pendulum motion" or "sagittal plane" contraction, both resulting in poor lateral excursion, and consequently low waves on the P.A. kymogram.[6]

CRITERIA FOR KYMOGRAPHIC DIAGNOSIS

The criteria for kymographic diagnosis are the depth (or height), shape, and phase of the waves.[9,10] The depth of the waves is considered relatively important. While the normal is quoted as ranging from 4 to 8 mm., often without specification of the target-film distance used, we found that in most of the cases in this series the waves were usually under 4 mm. in depth (See Figure 1). However, in the cases with myocardial disease of any type, the height (or depth) of the waves is often 2 mm. and frequently less than 1 mm. (All measurements made directly on the 48 inch distance film). Other findings sometimes suggestive of disease in the myocardium are "peaking" of the waves where the waves come to an abrupt point.

Splintering of the waves (both systolic and diastolic) was regarded as important in the diagnosis of disease, especially when it is accompanied by waves of low amplitude which appear fuzzy (unsharp), (See Figures 2, 5, and 6). Of course, the suppression of waves or absence of movement (so-called "silent frames") or the outright reversal of movement (so-called "paradoxical frames") in any area was considered diagnostic of myocardial damage, and when this occurred in the persence of suitable associated findings, an area of infarction was diagnosed. Localized adhesive pericarditis may produce suppressed and fuzzy waves and mimic an area of localized myocardial damage, but the condition was not encountered in this series.

The term, myocardial damage, is used in this report to include various cardiac abnormalities from myocarditis through myofibrosis to frank infarction. This term was used in this same broad sense in reference to interpretations of both the kymograms and electrocardiograms.

RESULTS

Because most of this study was done on Naval personnel, the average age of our cases (38 years) is somewhat less than one might expect in a general hospital. In the cases with a clinical diagnosis of

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The material referred to in this paper was seen at the U. S. Naval Hospital, Oakland, while the authors were on duty at that station in 1944-46. The opinions are those of the authors and in no way reflect the views of the Navy Department.



Figure 1.—Roentgen kymogram of a healthy adult, age 30, with tracing to illustrate the various types of waves normally present over the cardiovascular silhouette. The numbers refer to the individual "frames" above the left hemidiaphragm. P.A. view.

coronary artery disease, angina pectoris, or hypertension. the average age was 44.5 years.

Over 350 sets of kymograms were made. Of these, 275 cases are available for review. Two hundred and forty-nine of the patients had one or more electrocardiograms, so that a comparative test of the two methods of diagnosis of cardiac disease could be made.

To test the reliability of cardiac roentgenkymography on our miscellaneous group* we decided to use the electrocardiogram as an accepted test for the diagnosis of major cardiac disease and then match the kymogram against this method. In many instances. only single electrocardiograms (and kymograms) were made, but in other instances, serial tracings and x-ray studies were made. The electrocardiograph used was usually a "Cambridge Simpli-Trol" and occasionally a "Sanborn Cardiette." The leads were the standard limb leads and the IVF (the exploring electrode over the cardiac apex, and the indifferent lead on the left ankle). Most of the interpretations were made by Maurice Sokolow (then Lt. Comdr. MC, USNR). All interpretations of electrocardiograms were accepted as written in the clinical record and no "special emphasis" on reinterpretation was attempted, in order to insure an evaluation of the observed results of day-to-day clinical tests. The two methods correlated in 80.5 per cent of the cases, or 201 patients (See Table 1). There was a failure of correlation in 19.5 per cent, or 48 patients.

To test the methods against one another, figures were subjected to statistical analysis (Chi square

* The group comprised patients with various suspected or known cardiac disorders, and ranged from functional disturbances following tsutsugamuchi disease to frank coronary occlusion.

TABLE 1.—*Correlation of Kymograms and Electrocardiograms in the Diagnosis of Myocardial Disease*
(249 cases)

	Cases	Per Cent
Kymo and ECG positive	28	11.3
Kymo and ECG negative	146	58.4
Kymo and ECG questionable	27	10.8
Total correlated	201	80.5
Kymo negative, ECG positive	8	3.3
Kymo positive, ECG negative	12	4.8
Kymo positive, ECG questionable	3	1.3
Kymo questionable, ECG positive	5	2.0
Kymo questionable, ECG negative	8	3.3
Kymo negative, ECG questionable	12	4.8
Total failure of correlation	48	19.5

Note: The Kymograms were made within three to five days of the electrocardiograms in the vast majority of instances.

The term myocardial disease includes miscellaneous cardiac disorders ranging from myocarditis to frank infarction.

test), and it was observed that the chances of the particular figures observed occurring by chance would be less than one in a hundred, which is statistically significant.†

†We are grateful to Dr. Frank Weymouth, Professor of Physiology, Stanford University, for his aid in interpretation of the statistics.



Figure 2.—P.A. kymogram of male, age 54. Note the absence of normal waves in frame number 4 above the left hemidiaphragm ("silent" frame); and the reversed pattern in frames 5 to 7 ("paradoxical" motion). Roentgen diagnosis: myocardial damage, presumably infarction, involving the wall of the left ventricle. The patient was a physician with a clinical diagnosis of infarct. Autopsy verification 2½ weeks later.

Further analysis of the 48 instances of "failure of correlation" reveals that failures were made in a positive (Kymo) and negative (ECG) fashion and vice versa 20 times. It is not unreasonable to assume these represent inherent errors in both methods of examination. If so, this would leave 28 cases wherein there was need for further explanation. However, in this group of 28 cases, it is evident from Table 1 that all had questionable elements in the interpretation of the electrocardiographic tracing or the kymographic film; therefore, the actual aid that either one of these tests *might* be to the other is more considerable than the figures suggest. In other words, where one of these tests was positive, and the other questionable, one acted to confirm the other. On the other hand, when one was negative, and the other questionable, it is more likely that the negative result was correct. If we assume this, we resolve 28 of the cases in which there was some questionable failure of correlation of the two methods. The other 20 cases need further and more detailed individual case-by-case review. But, even if there were adequate explanation for none of these, it is evident that the overall figures result in an error of less than 10 per cent, which in clinical work must be regarded as proof of a quite reliable method of examination.

Roentgen cardiac kymography is not intended to replace other clinical methods or to supplant roent-

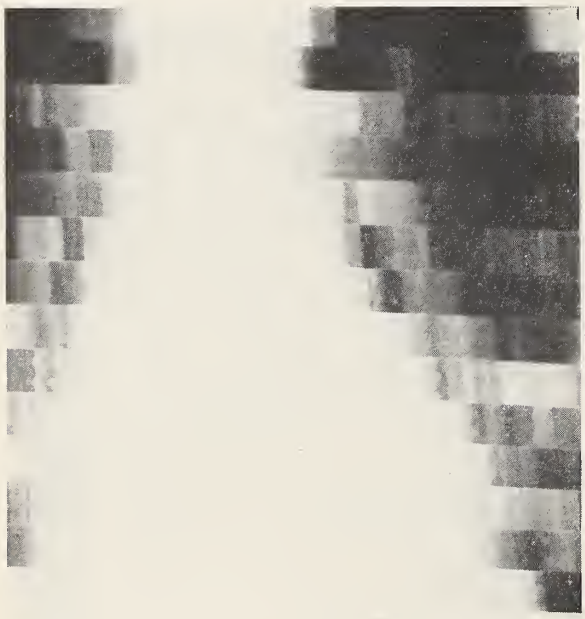


Figure 5.—P.A. kymogram of male, age 36. Note the very poor amplitude of the waves over the entire left side of the heart and over the lower half of the right. *These findings were also present in both the L.A.O. and R.A.O. projections.* Roentgen diagnosis: myocardial disease, severe probably infarction. Clinically, the patient had substernal pain and dyspnea, but his *ECG was repeatedly negative* before and after the kymograms were made. He was allowed to go on leave. After sprinting to catch a train his attacks recurred. The ECG findings then showed changes suggestive of coronary disease. Clinical diagnosis: Coronary occlusion.

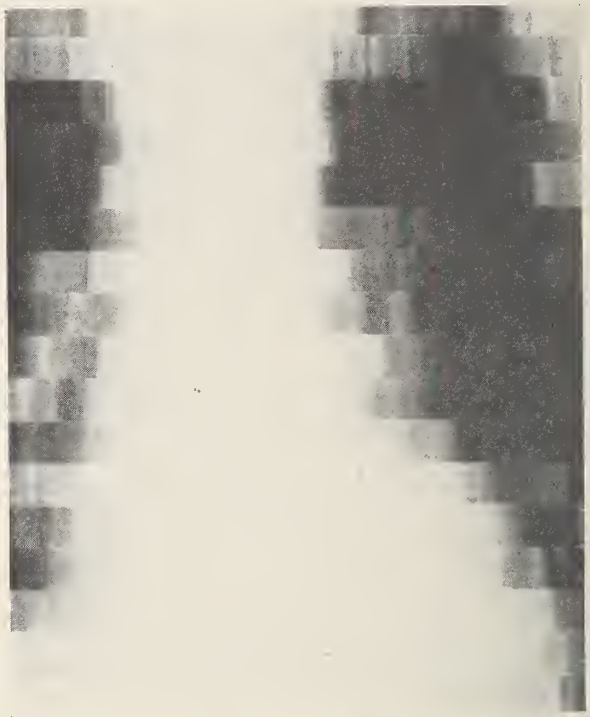


Figure 6.—P.A. kymogram of male, age 48. Note the shallow or paradoxical pulsation over most of the left ventricular border. ECG made the day before entry was negative. Clinical story questionable. Patient was released from hospital for ambulatory convalescence at home five weeks later and kymogram still showed evidence of a marked amount of myocardial damage. He developed acute substernal pain within 24 hours of departure from the hospital. Autopsy next day disclosed acute and recent infarction.

genoscopy or roentgenography. Properly interpreted, roentgen kymograms have been demonstrated here as a reliable source of additional information, and in a small percentage of cases can provide information not obtainable clinically or even by ECG.[2,3,8,11]

SUMMARY

A review of 249 cases in which both roentgen cardiac kymograms and electrocardiograms had been made confirms that the roentgen kymograph is a useful method of examination of the heart in clinically suspected cases and may give information which is not obtainable by any other method. Two hundred and one cases (80.5 per cent) correlated with the electrocardiogram. Forty-eight cases (19.5 per cent) did not correlate with the electrical tracing. Illustrative cases are used to bring out the various points of interest:

1. A case with autopsy proof exemplifying a typical myocardial infarct.

2. A case with autopsy proof of myocardial infarct in which the electrocardiogram was negative and the kymogram positive.

3. A case of a stab wound of the heart (Figures 3 and 4) in which the initial electrocardiogram showed evidence only of pericarditis while the kymogram was positive for localized myocardial damage. Subsequently, the electrocardiogram became positive, and ultimately, both sets of tests disclosed return to normal patterns.



Figure 3.—P.A. kymogram of a male, age 31. Note the "silent" frames, numbers 1, 2, and 3 above the left hemidiaphragm, indicating apparent absence of lateral motion in this area; very shallow amplitude of pulsation in frames 4 to 6 ("damped" motion). *These findings were also present in the L.A.O. projection.* Roentgen diagnosis: localized myocardial damage. Clinically, the patient had a stab wound in the heart. The ECG interpretation was "acute pericarditis."



Figure 4.—Same case four months later. Note return of normal motion over the lower half of the cardiovascular silhouette on the left. Clinically well. ECG also returned to within normal limits.

CONCLUSIONS

1. The roentgen cardiac kymogram provides a permanent record of cardiac pulsations.

2. Correlation of the roentgen kymogram with the electrocardiogram is good.

3. In cases of suspected myocardial disease in which the electrocardiogram is negative, the roentgen kymogram may provide invaluable diagnostic information, especially in cases of myocardial infarction.

4. The roentgen kymogram may serve to corroborate the correct clinical diagnosis when the electrocardiogram is inconclusive.

REFERENCES

1. Crane, A. W.: Roentgenology of the heart, Amer. J. Roentgenol., 3:513-524, 1916.

2. Dack, S., Sussman, M.L., and Master, A. M.: Roentgenkymogram in myocardial infarction; Part II, Clinical and electrocardiographic correlation, Am. Ht. J. 19:464-474 (April), 1940.

3. Garland, L. H.: Myocardial infarction—roentgen diagnosis, U. S. Naval Med. Bull., 45:89-96 (July), 1945.

4. Hirsch, I. S.: The recording of cardiac movements and sounds by roentgen ray (kymoroentgenography), Radiol. 22:403-425 (April), 1934.

5. Sabat, B.: Uber ein verfahren der rontgenographischen darstellung der bewegungen inner organe (des herzens, der aorta, des zwerchfells), Lwow Tygodn. lek, July, 1911, No. 28, p. 4. Republished in: Fortschr. a.d. Geb. de Röntgenstrahlen, 20:42-44, 1913.

6. Schwarzschild, M. M.: The physical principles of slit kymography, Radiol., 33:90-107 (July), 1939.

7. Schwedel, J. B.: Clinical roentgenology of the heart, Annals of Roentgenology, Vol. 18, Paul Hoeber, N. Y., 1946.

8. Selzer, A.: Recent trends in electrocardiography, Stanford Medical Bulletin, 4:7-15 (Feb.), 1946.

9. Stumpf, P.: Die gestaltanderung des schlagenden herzen im röntgenbild; Fortschr. a.d. Geb. de Röntgenstrahlen, 38:1055-1067 (Dec.), 1928.

10. Stumpf, P., Weber, H. H., and Weitz, G. A.: Rontgenkymographische bewegungslehre inner organe; Georg Thieme, Leipzig, 1936.

11. Sussman, M. L., Dack, S., and Master, A. M.: Roentgenkymogram in myocardial infarction; abnormalities in left ventricular contraction (Part I), Am. Ht. J. 19:453-463 (April), 1940.

Major Trigeminal Neuralgia

An Analysis of Two Hundred and Forty-five Cases

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MAJOR trigeminal neuralgia has been a well recognized clinical entity since Fothergill's classical description in 1776.[3] Early in the Nineteenth Century Bell,[1] in England, and Magendie,[10] in France, showed that the fifth cranial nerve rather than the seventh supplied sensation to the face. After this time the treatment of the disease improved rapidly, and it has been more or less standardized since Spiller and Frazier[13] described the procedure used by most neurological surgeons at present. Interestingly, this is one of the few diseases the treatment of which has been known for many years, but the etiology of which remains obscure in spite of considerable investigative work.

A series of 245 cases in our hospital has been reviewed. The disease was found to occur predominantly in the older age groups, the highest incidence being in the decade from 50 to 60 years of age (Figure 1). There were 159 females and 86 males, a ratio of nearly two to one (Figure 2). The right side was involved in 179 cases while the left was involved in only 75; in nine cases (3.6 per cent) there was bilateral involvement (Figure 3). The average duration of symptoms before the patients were seen at this clinic was 7.1 years for females and 7.2 years for males. The longest duration of symptoms was recorded in the case of a woman who had had intermittent episodes of severe pain for 35 years. The onset of pain was approximately equally divided between the second and third divisions of the nerve, onset in the first division being quite rare. The pain often spread to involve adjacent divisions. The second division was involved in 201 cases, the third in 180 instances, and the first in 66 cases (Figure 4). These figures denote only the total number of times pain occurred in the divisions and do not indicate in which division the pain originated.

The description of the pain was strikingly similar in each case. There was a sudden onset of jabbing, cutting, burning, lightning-like or electric-shock-like pain which radiated over one or more divisions of the trigeminal nerve. The radiation was to the peripheral distribution and never crossed the midline. Each individual shock was of short duration, but there might be many shocks in rapid succession. The pain stopped as suddenly as it began. In describing the pain the patients used the same general terms, in which there was a preponderance of adjectives connoting the thermal quality, the cutting sensation, and the suddenness of onset and cessation. As Frazier and Russell[5] have pointed out, the most commonly used adjectives were shooting, sharp, paroxysmal, burning, lightning-like, stabbing, lancinating, and tearing.

Although the first indication of the disease was usually a sudden, typical lancinating pain, there were several patients who noted a peculiar prickling, burning, throbbing sensation for days or weeks prior to the first sharp pain. In one instance a woman had this prickling, throbbing sensation in the upper lip and jaw for five years before the actual onset of paroxysmal pain.

Characteristically there were intervals of complete freedom from pain between the paroxysms, and complete remissions of pain for months or years. With



Figure 1

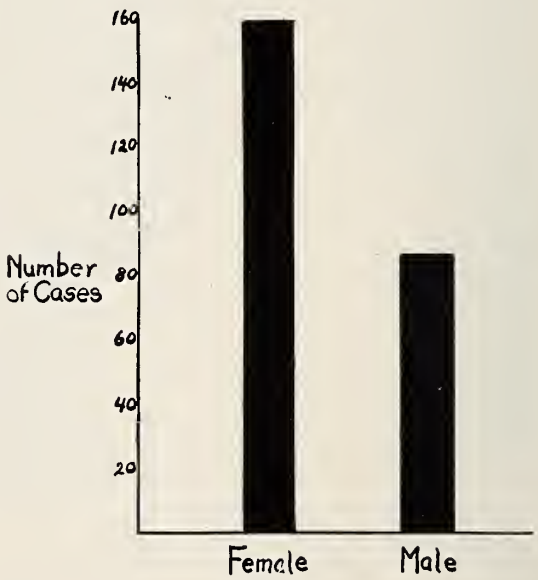


Figure 2

Read before the section on Neuropsychiatry at the 76th Annual Session of the California Medical Association in Los Angeles, April 30-May 3, 1947.

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each remission the patient hoped he would have no more pain, but lived in constant fear of a recurrence.

Usually, but not always, there were definite trigger areas, or small areas which if stimulated would precipitate an attack. These were most commonly on the lips, particularly at the angle of the mouth, the gums, the nasolabial fold, the ala of the nose, and the chin close to the mental foramen. During a severe attack stimulation over any area of the face on the side affected might set off a paroxysm. The trigger area was not always supplied by the same nerve distribution as the affected division. In one instance stimulation of the nasolabial fold precipitated pain in the first division.

The patients were able to describe accurately certain movements or actions which would cause pain. These were most commonly laughing, talking, eating, drinking cold or (sometimes) hot liquids, brushing the teeth, washing the face, or shaving. Many patients would protect their faces on going outdoors, for cold air or wind might give pain. They also learned to shield themselves from these stimuli and to keep the involved side of the face immobile, talking out of the opposite corner of the mouth. They resented examination or any attempt of the examiner to touch the face.

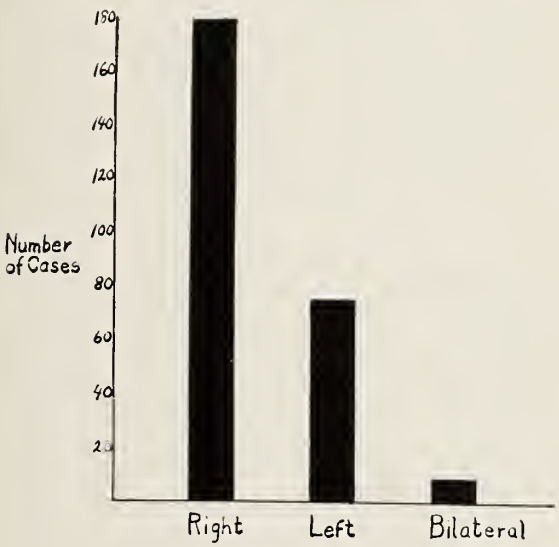


Figure 3

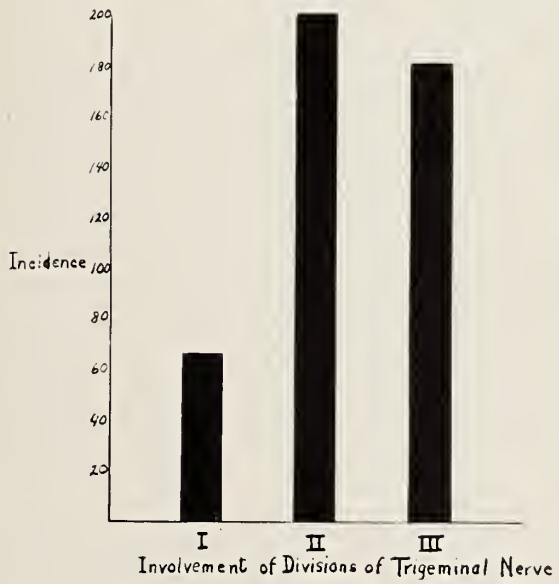


Figure 4

The radiation of the pain varied not only with the division or divisions involved but also in individuals. Often the pain seemed to strike anterior to the ear with explosive violence and then radiate into the peripheral distribution along the upper or lower jaw, into the lips, beneath or above the eye. Radiation into the tongue was not uncommon. In other patients the pain might have its origin in the jaw or gums and radiate upward toward the ear or temple. Many of these people firmly believed that the teeth were the cause of the pain and insisted on extractions. In this series 69 patients (28.1 per cent) had had extractions, usually multiple, in the hope of relieving their pain.

Although the characteristic pain in trigeminal neuralgia is sudden in onset, with cessation and complete freedom from pain between attacks, 44 patients (17.4 per cent) noted residual soreness following an attack, or pain between attacks. Of these, 24 had only residual soreness, aching, or burning sensation, which lasted from minutes to hours after the typical paroxysmal attack of pain. In this group sensory root sections were done in 21 and alcohol injections alone in three cases. All obtained relief. There were postoperative paresthesias in two cases. The remaining 20 of the 44 patients had continuous aching pain between attacks with the paroxysmal lancinating pain superimposed. Sensory root sections were done in 15 cases and alcohol injections alone in five cases. All except one patient obtained complete relief. In this case several alcohol injections were attempted but all were unsuccessful, giving no anesthesia and no relief from pain. A sensory root section was done and this relieved the lancinating pain entirely but did not affect the dull, constant aching pain. There were two cases of mild postoperative paresthesias in this group also.

In 15 cases (6.1 per cent) there were definite manifestations of sympathetic involvement during the attack of pain. In these cases there was flushing of the face, lacrimation, injection of the conjunctiva, or increased salivation. In one case there was marked blanching of the skin over the area of pain in the distribution of the second and third divisions of the trigeminal nerve. All these patients obtained relief from either sensory root section or alcohol injection. There were two cases with mild postoperative paresthesias.

In most instances there was no evidence of predisposing factors. The pain struck suddenly for no apparent reason. However, in 25 cases (10.2 per cent) the patients related the onset of their pain to some definite circumstance. In 19 of these the pain followed a tooth extraction or

other dental work. None of these patients had consulted a dentist because of pain. Typical paroxysmal pain followed the dental work within a period of three hours to two weeks, and the pain centered in the area in which the dental work had been done. In four cases the pain followed sinus infections. In one case the pain followed a blow to the jaw and laceration of the lip, and in another the pain started during a course of x-ray therapy for a basal cell carcinoma of the nose. In these last six cases the typical paroxysmal pain centered in the region which had been previously involved by infection or trauma. All were completely relieved by sensory root section or alcohol injection.

Treatment in this series was primarily surgical. Alcohol injections were done in 175 cases. Many of these patients had multiple injections. The longest period of relief from an alcohol injection was seven years. The average duration of relief was from six to fourteen months. Neurectomies were done in 50 patients. These were mainly supra-orbital, infra-orbital, and inferior alveolar neurectomies, and the period of relief averaged approximately the same as with alcohol injection. Sensory root sections were done in 179 patients. In most of these either alcohol injection or neurectomy had been performed previously. There were three deaths following root section by the subtemporal approach, an operative mortality of 1.6 per cent. Postoperative paresthesias occurred in 27 cases (15 per cent). These consisted of itching, crawling or burning sensations over the anesthetic areas. Some had shooting pains somewhat similar to the original neuralgia but of less severity. The majority of these paresthesias were mild, but in a few instances they were troublesome and persistent. In 32 cases (17.8 per cent) a temporary facial palsy appeared postoperatively, which, however, cleared completely in all instances. The incidence of keratitis in those cases with anesthesia over the first division was low, and available records show only five cases (2.9 per cent). None were severe. Where partial root section was performed pain later appeared in six cases in the undivided portion and required reoperation. In one case of major trigeminal neuralgia involving only the second and third divisions, a differential section was performed, sparing the first division. Seven years later typical pain appeared in the first division and was relieved by complete section of the sensory root. One case with typical shooting pain, but with overflow of the pain into the neck, had no relief from root section. This patient probably had an atypical neuralgia the nature of which might have been shown by alcohol injection preoperatively. Grant [8] had in his series seven similar cases in which he believed alcohol injection would have established the diagnosis and prevented an unsatisfactory operative result.

Trichlorethylene was used in 48 patients in which there was adequate recording of the results. Of these, 25 received some benefit, while 23 could see no change in the character or severity of the pain. In those patients who obtained relief, the usual comment was that it "took the edge off the pain." In some it seemed to hasten a remission, while in a few there was immediate relief. It was noted, however, that often the inhalations would give relief for three to four months and then have no further beneficial effect.

DIAGNOSIS

In the typical case of major trigeminal neuralgia the diagnosis may be made from the history alone. It is confirmed by the absence of neurological changes on examination. As Frazier [4] has pointed out, a diagnosis of trigeminal neuralgia is not justified when there is an associated area of anesthesia or hyperesthesia in the trigeminal zone, when the pain is continuous and not paroxysmal, when there are not periods of complete freedom from pain in the early stages, or when the location of the pain does not correspond to the anatomic zones.

Cushing [2] listed five types of facial neuralgia which might be mistaken for major trigeminal neuralgia. He included sphenopalatine, postherpetic, and geniculate neuralgias, as well as convulsive tic and neuralgias due to tumors. In postherpetic neuralgia there is frequently a sharp shooting pain identical with that in trigeminal neuralgia, but usually there is also a constant burning sensation over the area involved. The history of herpetic lesions and the presence of scarring suggest the diagnosis. The pain in geniculate neuralgia may be differentiated by its location in the ear. Tumors in the cerebello-pontine angle and in or adjacent to the gasserian ganglion may likewise give identical pain (i.e., symptomatic tic) in the early stages. The presence of anesthesia is diagnostic. Sluder [12] has noted that the pain of sphenopalatine neuralgia may occur with stabbing sharpness as in a tic, but with spread of pain over the occiput, neck, and shoulder, and often into the arm. In convulsive tic the paroxysmal pain is associated with the muscular spasm and does not precede it as is the case in a true tic where grimacing may follow the onset of pain.

Many other conditions and their differentiation should be considered. Glossopharyngeal neuralgia causes shooting pain identical with that of trigeminal neuralgia but with its distribution in the pharynx and base of the tongue. Diseases affecting the central nervous system, such as multiple sclerosis, syringomyelia or syringobulbia, and tabes dorsalis, may produce similar pain,[15] but in our experience such cases are extremely rare. Aneurysms involving the sensory root or, more commonly, the first division of the trigeminal nerve usually give rise to a more constant pain associated with sensory or motor changes. Head and facial pain due to vascular disturbances such as the histamine type headache and migraine are distinguishable by the onset and duration of pain. Sinus infections, dental abnormalities and refractive errors ordinarily do not give rise to paroxysmal pain.

In addition, there is a fairly large group of patients whose facial pain is transitional between major trigeminal neuralgia and migraine.[7] It was recognized early that some patients did not get relief from

operative attack on the trigeminal tract in spite of the resulting anesthesia. Frazier and Russell [5] noted certain peculiarities in the type of pain in this group of patients and in 1923 classified such cases as atypical neuralgias. Glaser [6] described the complete syndrome in 1928. The pain is a peculiar, deep-seated ache not referred to the periphery, and is constant and not paroxysmal or intermittent. The syndrome is characterized by attacks of greater or lesser severity at varying intervals. Remissions are rare. It is far more common in females than in males and predominates in the younger age groups. In 50 per cent of the cases there are sympathetic phenomena. The pain does not confine itself to the distribution of any of the cranial nerves, but may involve the scalp as well as the neck and shoulder. In spite of this fairly constant and typical picture, there are instances where the atypical neuralgia may so closely simulate major trigeminal neuralgia that differentiation can be made only by the use of alcohol injections to block the divisions involved. The necessity for accurate diagnosis must be stressed, for it has been thoroughly proved that in atypical neuralgia, as in postherpetic neuralgia, section of the trigeminal nerve not only fails to relieve the pain, but frequently makes the complaints worse.

COMMENTS

Of interest in this series is the group of 44 patients who had residual soreness following paroxysms of pain and continuous pain between paroxysms. Although each had the typical lancinating pain of trigeminal neuralgia, each also had the deep aching pain characteristic of the atypical neuralgias. Since all except one of these patients were completely relieved by alcohol injection or root section, one must conclude that 43 of them had true trigeminal neuralgia.

Similarly, the 15 patients that showed sympathetic phenomena during the paroxysm of pain were all relieved by alcohol injection or root section. Glaser [7] states that sympathetic manifestations occur in 50 per cent of the atypical neuralgias, but are not found in true trigeminal neuralgia. This has not been our experience. In our group the pain was relieved and one must conclude that it was due to major trigeminal neuralgia. Postoperative paresthesias were not more common in these groups than in others with the typical tic.

These two groups serve to emphasize the fact that the clinical picture of trigeminal neuralgia is not always clear-cut and may have features suggestive of atypical neuralgia. It is of particular importance in these cases to make an accurate diagnosis by the use of alcohol injection before performing root sections. If pain is relieved at once when the area is made anesthetic we can be certain of the diagnosis and that section of the root will give lasting relief.

Harris,[9] in his survey of 1,433 cases, states that peripheral sepsis, from such origins as dental caries, pyorrhea, antral abscess and sinusitis, is the prime cause of the disease. No definite relationship of the incidence of trigeminal neuralgia to infection has been shown in other large series,[11] nor has there been any definite relationship to infection in this series. However, the onset of typical trigeminal neuralgia in 19 cases immediately following tooth extraction or dental work seems too frequent an occurrence to be mere coincidence. It would appear that some change had occurred at the peripheral nerve endings which played a part in causing the disease.

The use of trichlorethylene in the treatment of trigeminal neuralgia seemed to be of value in this series, although others [14] have felt the drug was useless in all instances. It proved worthwhile in treating several patients 80 years of age and over, when their condition was such that the operative risk was considered too great and alcohol injections had been unsuccessful. In a few cases the relief was immediate and complete. Whether this was due to regular remissions or not cannot be determined.

Alcohol injections serve two main purposes. If the pain is completely relieved by injection, the diagnosis is established and sensory root section can be carried out with confidence that the pain will be permanently relieved. The anesthesia produced by the injection also serves to accustom the patient to the permanent anesthesia produced by root section. Some patients who were poor operative risks have been kept in comfort by repeated alcohol injections over a period of years.

It is felt that the procedure of choice is a differential section of the sensory root wherever possible with sparing of the motor root. The operative mortality of 1.6 per cent is not unreasonable when one considers that the majority of operations are done on patients between 60 and 75 years of age who often are in a poor state of nutrition because of their inability to eat during their attacks of pain.

DISCUSSION BY NATHAN CROSBY NORCROSS, M.D., OAKLAND

The problem of trigeminal neuralgia has always been a fascinating one to me, more so, perhaps, since the first operation I performed was No. 1002 in Charles Frazier's old operating room. I feel that today we are well equipped to deal rationally and successfully with this disorder. I think the authors of the paper have covered the field thoroughly and with great insight. There are a few comments that I would like to add. The pain of true, major, trigeminal neuralgia is characterized by three things. It is *paroxysmal*; it is *peripheral*; and it is *parallel*—that is, parallel to the anatomical course of the branches of the trigeminal nerve. If these three features are kept in mind, one is unlikely to make a mistake in the diagnosis. As the authors have noted, however, there is an occasional patient apparently having true tic who does not obtain relief from section of the sensory root of the nerve. Even though this percentage is small and has been small in other series of cases, I feel that it is enough to make us want to carry out an alcohol injection before operation is recommended. The alcohol injection is a temporary procedure. The patient will recover from its effects. On the other hand, the operation is permanent and no restoration of function will take place in the nerve involved.

There are several other factors in the use of alcohol injection which I, with the authors, feel make it warranted in practically all cases of this sort. First is the old, debilitated

patient who comes in suffering from severe malnutrition. This is brought on by the intense pain provoked by any attempt to eat or drink. This patient is in no condition for operation and should be given temporary relief by the simplest method possible in order that he can be built up and got into condition for later operation. Second: Occasionally the differential diagnosis between true tic and atypical facial neuralgia or a combination of neuralgias is extremely difficult and, in these cases, alcohol injection is the diagnostic agent of choice. Third is the patient who will have severe paresthesias following root section. These patients cannot be segregated from the others until an alcohol injection or the operation has been performed. To be sure, they constitute a small percentage, perhaps between 3 and 5 per cent. They state that the paresthesias are almost or fully as severe as the pain they had prior to operation. I feel that the classical, subtemporal approach of Frazier is probably not the most desirable procedure in this small group, but that we should consider trigeminal tractotomy which leaves sensation in the face almost normal. So far as we know at present, this procedure offers a better chance of avoiding severe, incapacitating, postoperative paresthesia.

Trichlorethylene has been found to be a helpful adjunct in the early treatment of this condition in some patients and I, empirically, add to that large doses of B-1. With trichlorethylene I have been able to bring about what appears to be spontaneous remissions from tic for fairly long periods of time. This brings up a point that I feel about quite strongly. In the more elderly group of patients I do not feel we are warranted in rushing ahead to recommend major surgery. To be sure, the mortality rate of this procedure is only between 1 and 2 per cent and this has been essentially true for all of the various reports of large groups that have appeared in the literature. One must remember, however, that in many of these elderly patients some of the less radical methods will relieve the pain for the duration of their lives, without their having to be subjected to a major surgical procedure.

In regard to the possible etiology of tic about which, as the authors have said, nothing conclusive is known, one hint has been brought out by Lewy and Grant, from their pneumoencephalographic and histological studies of patients with major trigeminal neuralgia. Histologically, in six cases it was demonstrated that there were degenerative changes of the thalamic nuclei and of the corona radiata, bringing about some degree of interruption of the thalamocortical fibers. The surprising thing about their findings was that in five cases out of six these lesions were found only on the same side as the tic had been. Encephalograms had also been performed at the University of Pennsylvania during that time and several of these demonstrated atrophic changes deep in the ipsilateral hemisphere, apparently caused by wasting of the thalamus. Also, attention was called to the fact that of one group of 50 cases investigated thoroughly, 30 showed definite evidence of arteriosclerosis and renal dysfunction.

REFERENCES

1. Bell, C.: The nervous system of the human body, ed. 3, London, H. Renshan, 1844.

2. Cushing, H. C.: Trigeminal neuralgias and their surgical treatment based on experiences with 332 gasserian operations, Am. J. M. Sc., 160:157 (Aug.), 1920.

3. Fothergill, J.: Of a painful affection of the face, Med. Obs. Soc. Phys., London, 5:129, 1776.

4. Frazier, C. H.: Neuralgias of the trigeminal tract and facial neuralgias of other origin, Ann. Otol. Rhin. & Laryng., 30:855 (Dec.), 1921.

5. Frazier, C. H., and Russell, E. C.: Neuralgia of the face, Arch. Neurol. & Psychiat., 11:557 (May), 1924.

6. Glaser, M. A.: Atypical neuralgia, so-called; a critical analysis of one hundred and forty-three cases, Arch. Neurol. & Psychiat., 20:537 (Sept.), 1928.

7. Glaser, M. A.: Atypical facial neuralgia, diagnosis, cause and treatment, Arch. Int. Med., 65:340 (Feb.), 1940.

8. Grant, F. C.: Results in the operative treatment of major trigeminal neuralgia, Ann. Surg., 107:14 (Jan.), 1938.

9. Harris, W.: An analysis of 1,433 cases of paroxysmal trigeminal neuralgia (trigeminal tic) and the end-results of gasserian alcohol injections, Brain, 63:209 (Sept.), 1940.

10. Magendie, F.: A summary of physiology, translated from the French by John Revere, Baltimore, E. J. Coale & Co., 1822.

11. Peet, M. M.: The cranial nerves, in: Practice of surgery, Dean Lewis, Vol. XII, Chapter 2, p. 26, Hagerstown, Md., W. F. Prior Co., Inc., 1944.

12. Sluder, G.: Headaches and eye disorders of nasal origin, St. Louis, C. V. Mosby Co., 1918.

13. Spiller, W. G., and Frazier, C. H.: The division of the sensory root of the trigeminus for the relief of tic douloureux, Univ. Penn. M. Bull., Phila., 14:342 (Dec.), 1901.

14. Spurling, R. G.: Major trigeminal neuralgia, Kentucky M. J., 33:372 (Aug.), 1935.

15. Walker, A. E.: The relief of facial pain, M. Clin. North America, 29:73 (Jan.), 1945.

Relationship of the Health Officer and the Practicing Physician to the Planning of Smaller Hospital and Health Center Facilities in California

P. K. Gilman, M.D., *San Francisco*

THE Bureau of Hospital Surveys of the State Department of Public Health has but recently completed a state-wide study of existing hospital and health center facilities in California. Similar surveys have been or are being made in the majority of the states and information secured is being correlated by a special staff at the headquarters of the American Hospital Association in Chicago. When completed this voluminous material will form the basis for determining the existing health facilities of the nation.

As a result of the study in California a plan will be drawn up and recommendations will be made as to what type of facility is needed and where it should be located to make hospital care available to all areas. This planning will take cognizance of existing institutions which are rendering adequate service.

California has been tentatively divided into 18 regions conforming broadly with established trade areas but not political boundaries since county and regional lines do not necessarily coincide. Each area or region is planned to contain a centrally located regional hospital surrounded by an adequate number of community general hospitals which in turn are encompassed by smaller community health centers. The community general hospital and the health center will of necessity offer more limited types of service and rely on the central regional institution to augment their facilities and special services just as the latter will in turn rely on the teaching hospital connected with a medical school for certain highly specialized procedures.

The problem of supplying an adequate type of service becomes increasingly difficult as the distance from the centers of population concentration increases. It is a problem of personnel as well as one of adequate facilities.

If one stops to consider the situation it becomes evident why newly graduated doctors of medicine prefer the larger centers. We train these men under ideal conditions of equipment and leadership in the various special branches of medical science. The student and intern is thrown with men who stress the most modern methods of diagnosis and therapy in an atmosphere of practice at its best. Can we blame these same young men if they desire to continue in as close association with this particular set of conditions as is possible? Is it to be expected any of them will elect to isolate themselves in communities where it is impossible to practice as they have been taught, impossible to apply the methods they have been told are necessary?

How may the desired standards of service be attained and, just as important, maintained? The mere construction of hospitals and health centers in the absence of medical and technical personnel would accomplish nothing. Likewise, personnel will not willingly choose to settle in areas lacking adequate facilities. The remedy is not to be readily found. It is generally agreed among those who are interested in this situation that economic conditions, while responsible to some extent, are not the only factors influencing this availability.

One important step toward the goal of adequate care in the areas where the density of the population does not justify the erection of any facility but one rendering limited service would be the establishment of a combined medical service center and public health center operated to supply not only hospital facilities and diagnostic and curative medical care, but public health services for the prevention of illness.

To bring about desired health facilities properly staffed to function efficiently there must be developed a close cooperation and association between at least three groups—the public, the medical profession and the public health department.

The people of a community will enjoy the type of public health and medical care it desires and demands. If the public is not in a position to judge what constitutes proper standards for their particular community, it is the duty of both the practicing physician and those representing the health department to see that the public is instructed and brought up to date in regard to such standards.

To carry out such an educational campaign effectively, there should be the closest working relationship between the medical men engaged in private practice and those concerned with preventive methods. It is only by this cooperation and mutual help that the desired result will be attained and facilities developed that will attract personnel and adequately serve the community.

Ideally such a plan requires the appointment of a full-time, specially trained, experienced medical officer of health and an adequate staff. This set-up should receive encouragement and cooperation from state medical, dental and nursing organizations, as well as from official and voluntary health agencies.

Read before the section on Public Health at the 76th Annual Session of the California Medical Association in Los Angeles, April 30-May 3, 1947.

Chief, Bureau of Hospital Surveys, Division of Preventive Medical Services, California State Department of Public Health.

There should be an increasing understanding between practicing physicians and their colleagues in related fields concerning the role of local government in making available the resources which the services of preventive medicine are constantly expanding, as well as the place these resources occupy in relation to the practice of diagnostic and curative medicine in a community. The line of demarcation between the two is becoming less sharply drawn as new methods and techniques are developed and new fields invaded.

The detailed planning of hospital facilities—the number, type, and distribution—depends upon a thorough consideration of several factors. A general over-all estimate may be made on the basis of certain broad principles of hospitalization generally accepted and in common usage. The United States Public Health Service has promulgated the following bed standards:

General	4.5 per 1000 population
Tuberculosis	2.5 times average annual deaths from tuberculosis
Mental Disease	.5 per 1000 population
Chronic Disease	.2 per 1000 population

In estimating the hospital needs in California, the following tabulation is based upon the application of these standards to estimated population for 1946. The figures indicate the estimated number of beds necessary in each category, the number available on the basis of the current survey, and the estimated shortage in each class.

	Estimated Needed	Available	Estimated Shortage
General	41,625	27,525	14,100
Tuberculosis	9,920*	6,885	3,035
Mental	46,250	27,450	18,800
Chronic	18,500	5,200	13,300
Total	116,295	67,060	49,235

* Based on average annual number of deaths, 1940-1944.

These estimates are subject to many conditional factors which must be studied in detail before they may be unqualifiedly accepted. They do not take into consideration the number of general beds that need replacement.

The planning of new hospital and health center facilities for smaller communities becomes more complex as their functions and the place they should occupy in the community broaden. Construction and maintenance of such institutions is expensive, and it is by combining forces and creating a center from which emanate all health activities of the community that an improved standard of care may be more readily supported.

Through the close association mentioned above between an enlightened public, the private practitioner and the public health official, the desired goal will be brought nearer. It is, therefore, the duty of the medical profession and the health officers to work in close association in such manner as to make possible a high quality of health care in the smaller communities throughout the state.

DISCUSSION BY EDWARD LEE RUSSELL, M.D., SANTA ANA

Dr. Gilman's paper is a concise statement of the main objective of every medical statesman in America. It is mainly, to provide medical care which can be delivered promptly, adequately and of uniformly high quality, to all the people, everywhere. It is obvious, from Dr. Gilman's paper, that this objective cannot be easily achieved. As Dr. Gilman has indicated, the solution of this problem involves providing, first, the adequate physical facilities—regional hospitals, community general hospitals and health centers. This job, alone, is a tremendous undertaking which involves not merely an increase in beds, but the elaboration of a complex plan which makes proper allowance for all variants such as the age composition of the population, population distribution; the changes in medical practice due to new medical discoveries, and the changing hospital use habits of the general public.

As Dr. Gilman states, we must not only develop the physical properties, but must prepare to staff them adequately with competent physicians, nurses, technicians and service personnel. This, in itself, is a herculean task. We are just beginning to feel the full impact of the physician and nurse shortage. The recent war consumed years of educational time which, now, in most cases will not be retrieved. The finest and most modern hospitals, laboratories, x-ray equipment, physical therapy departments and diet kitchens without staff are valueless.

However, this great hospital system, which Dr. Gilman envisages, is neither visionary nor impractical. These are the basic essentials of adequate medical care for the American people. This plan, likewise, will change the pattern of medical practice for the future. Medical practice of the future will focalize around, and radiate from, the hospital and health center. We will see more of group practice and less of individual private practice, as we now know it.

Private practitioners and public health men will, of necessity, have a closer working relationship. This will be mutually beneficial and will more completely achieve their joint objective to maintain and improve the public health.

A Tularean Looks at Tularemia

Ray W. Rosson, M.D., *Tulare*

TULAREMIA is a topic of interest to the physician in general practice and to various specialists, including internists, surgeons, dermatologists, pediatricians, and even at times gynecologists.[1,2,3,5,9] It is by name an appropriate subject for consideration in Tulare County, California, from which it derives that name.

In 1911 here in Tulare County, McCoy and Chapin isolated the *bacterium tularense* in ground squirrels which were dead or dying due to a disease affecting them at that time.[3] The author has been told by old-timers of this city that their field work was carried out in the area about 12 or 14 miles south of the town of Tulare. A guess is that McCoy and Chapin were most fortunate in locating a transitory localized epizootic. As a boy here, and sometimes in or near the very spots where they worked, I personally and with bare hands skinned or cut open numerous squirrels and rabbits, and knew dozens of other boys who did. Wearing gloves to do these things would have been ridiculous to us in those days, but I never heard of infection or sickness resulting.

In the many years that I have practiced medicine here I have been interested in tularemia. I have always hoped to find a case and have had agglutination tests made in search of it innumerable times. But I had seen no tularemia in Tulare County until in June, 1946, I found a bona fide case of it which was contracted within this county. The disease must be rare in this place of its scientific birth.

Aside from the case I reported, I have been informed through the Tulare County Health Department that it has no record of any tularemia being reported in Tulare County from December 31, 1940, when reliable records on it were started, to the time of writing this, except one in 1944 reported by an osteopath. Of this last-mentioned case there is no record with the County Department (or with the State of California Department of Public Health) concerning the methods used to diagnose nor any follow-up report of the case. In the circumstances, I am inclined to withhold judgment as to its authenticity. Of course, the number of wild rabbits and squirrels in this vicinity has greatly decreased since 1911, but on the other hand the human population has greatly increased.

The California State Department of Public Health has kept records on tularemia since 1927, and on June 2, 1928, the disease was made officially reportable in this state. In the period 1927 to 1946 inclusive, there have been only 322 cases reported to the State Department from all the counties of the vast area of California. Of these, 75 were not chargeable to any one locality and included were patients already ill or in whom the disease had been diagnosed before they entered this state, or who were itinerants. Although in Fresno County, which adjoins Tulare County on the north, just six cases have been reported in this period 1927 to 1946 inclusive, in Kern County, bordering us on the south, 48 cases have been reported during that time. But the state authorities waited ten years with special interest watching for a case from Tulare County, until in 1937 two cases were reported in that one year. Altogether there have been just six cases *ever* reported to the State Department from Tulare County, and in one of these the infected person had been skinning rabbits in Missouri. Since another case was the one reported in 1944, there remain only four cases, over a period of about 20 years, with officially established diagnostic reports, which in my opinion can be considered as probably having their source in Tulare County.

After the work of Francis in 1919 it was known that the *Pasteurella tularensis* definitely caused the disease in humans.[2] In scanning works upon the subject I get the impression that Foshay has given us more information than anyone else in recent years.

Tularemia has sometimes been called Francis' disease, deerfly fever, rabbit fever, Ohara's disease, and several other names.[3] The common methods of contracting infection with *Bacterium tularense*, such as skinning or dressing wild rabbits or squirrels, tick or horsefly bites, animal bites, and laboratory infections, are added to by numerous and various contacts with many kinds of other animal life.

The disease can be caught by handling infected animals with no known abrasion of the skin being necessary, by ingestion of infected and insufficiently cooked flesh, and probably by inhalation.

FORMS OF THE DISEASE

Numerous forms of the disease are described, but for practical purposes they may usually be divided into the ulceroglandular, the typhoidal, and the pneumonic.

The incubation period is one to ten days, with two to four days the usual.[3] The onset is quick or sudden and in most cases of all types is ushered in with fever, chills or chilly sensations, extreme fatigue, generalized muscular pains, slight nausea and some headache. At times diarrhea is an early symptom. Some cases are preceded briefly by malaise or cough. The first few days of fever are often followed by an intermission that may be misleading, as after a few more days fever returns.

In the most common type, the ulceroglandular, a painful papule or other small swelling appears at the contaminated area as the primary lesion, many times on the finger or hand, and quickly thereafter the regional lymph nodes (for instance the arm and axilla from a primary finger lesion) enlarge and be-

come painful and tender. The primary sore becomes an ulcer; the lymph nodes continue to enlarge and eventually often suppurate. (Recent treatment may alter this course.)

In the pneumonic type, which seemingly may be primary or come in connection with the typhoidal or another form, there is cough, and sometimes pain in the chest. Fever is variable in height. The patients are usually profoundly sick. It is wise in some cases that give the appearance clinically of an atypical or virus pneumonia to test for tularemia.

In the typhoidal type there is usually a high fever, repeated chills, mental flightiness or an irrational condition, and in fact often a very dangerous picture.

Beckman [2] says (and I am assuming he means before streptomycin was used for tularemia) that the mortality rate of tularemia is considered to be about 6 per cent. Foshay and Pasternack [6] state that the disease (that is, I feel sure of course they mean before the use of streptomycin for it) usually causes: 31 days of fever; 31 days in bed; four months' duration of disease characterized by buboes for 3.5 months, disability for 3.5 months; and a healing time of 39 days for primary lesions.

Laboratory findings are of great value in diagnosis. The agglutination test is carried out. Literature upon tularemia mentions titers going up into the thousands at times and usually into at least the hundreds. Howe et al.[8] noted that laboratory workers who by immunization had a previous titer of 1:320, which went down at the onset of the febrile stage or shortly thereafter to 1:80 or even 1:20, later had it go up into the hundreds or the thousands. The agglutination test is usually not of value until about the second week of illness, but the intradermal test of Foshay gives a positive reaction earlier. Animal inoculation from the blood, sputum (in tularemic pneumonia), or bubo of a patient, and isolation and cultivation of the *Pasteurella tularensis* from the animal lesions is of course used. The leukocyte count runs from normal to a slight or a moderate leukocytosis.

Prevention of tularemia obviously is best accomplished by avoidance of contamination. Those who dress rabbits should wear rubber gloves. The flesh of rabbits should be well cooked. Immunization is probably at best only partially accomplished by the vaccine injections of Foshay. Although all of the seven patients recently reported by Howe et al.,[8] who were accidentally infected during the course of their laboratory work, had previously received Foshay tularemia vaccine, the authors said that the vaccination may have modified the disease. An attack of the disease confers immunity.

TREATMENT

Treatment in the past has included numbers of the older drugs, serum made from horses and goats, and even excision of the primary ulcer. The sulfonamides and penicillin have of course been tried. All of the foregoing have been found useless or of only doubtful or occasional value, except possibly the Foshay serum. Beckman,[2] however, reminds us that although the United States Public Health Service said in April, 1940, that there is not any specific treatment for tularemia, Foshay still made claims for his antiserum although even he did not advise it as a routine measure. Foshay and Pasternack [6] reporting the treatment of seven tularemia patients with streptomycin include in their paragraph comparing streptomycin with serum therapy the following statement: "Although we have records of serum treated patients that compare favorably with any recorded here, we could not match them by selecting any seven case records at random."

So, we arrive at what seems by evidence, at least thus far, to be the greatest advance in treatment of tularemia—the use of streptomycin.

Before entering more upon a discussion of streptomycin it should be mentioned that incision of the abscesses resulting from buboes is often necessary and extremely valuable, but should usually not be done until they are far advanced. The use of streptomycin shows indication, if given early, of heading off the formation of abscesses in a large percentage of cases. The common ulceration of even the primary sore is said to be prevented often in cases where streptomycin is used.

Foshay and Pasternack,[6] in the already mentioned report of seven cases of tularemia treated with streptomycin, noted that six of their patients were relieved of the distressing general symptoms of headache, mental dullness, sense of prostration, arthralgias, myalgias, chills or chilly sensations, and nausea, before the end of the first day of treatment, and that by the end of the second day this effect was striking. In addition to these six cases there was one of pneumonic type with resolution following hyperimmune goat serum that later showed trouble due probably to splenitis and the perisplenitis followed by peritonitis. When this patient was given streptomycin beginning on the 103rd day of the disease, she appeared to have a late and serious aspect of the disease rather dramatically favorably influenced, and not many weeks later she appeared to be in perfect health.

In August, 1946, Cohen and Lasser [4] reported the successful treatment with streptomycin of a case of primary tularemic pneumonia in which the patient had been considered moribund. Penicillin and sulfonamides had not been effective.

In August, 1946, Peterson and Parker [10] reported a case of tularemic pneumonia first treated, without benefit, with penicillin. On the eleventh day the diagnosis of tularemic pneumonia was made, penicillin was stopped, streptomycin started, and dramatically fine sequences were observed.

Also in September, 1946, Gordon [7] reported a case of typhoidal type of tularemia with tularemic pneumonia, in which the patient showed no benefit from penicillin or sulfadiazine, but improved rapidly when treated with streptomycin.

CASE REPORT

A report of my case follows:

A 37 year old man called at my office on June 11, 1946, complaining of a sore between the middle and ring fingers

of the left hand, and of slight soreness in the left arm and left axilla. The only past history obtainable at that time was that the patient had noticed the sore a few days before and thought he had scratched his hand in some way on the ranch although he could not remember when. He apologized for coming for such a small reason.

Physical examination revealed a well-nourished, cheerful-appearing man who walked briskly into the office. The temperature was 99°F. On the web between the middle and ring fingers of the left hand was a slightly raised rounded area a little less than 1 cm. in diameter at its base (Figure 1). The epithelium appeared to be intact. There was slight enlargement and slight tenderness of lymph nodes on the medial side of the left arm and in the left axilla (Figure 2).

The picture was so like many of the ordinary accidental infections seen that a protective dressing was applied to the hand, and a sling to keep the extremity quiet was offered but was refused by the patient as superfluous. In two days when the patient returned, the hand infection had begun to ulcerate slightly and the lymph nodes were sorer and very slightly larger. The man had been advised not to work but he said he felt all right and continued to do so. He was doing physical work and driving an automobile. His temperature, however, was 100.4°F. Hospitalization to afford further study of the case as well as treatment was recommended but refused. Laboratory tests, including the agglutination test for tularemia, also were refused. Three hundred thousand units of penicillin in oil and wax was given in an intramuscular dose on two different days. A day or so later a severe urticarial rash broke out over all the patient's body, and it was accompanied by intense itching, a temperature of 102°F. and severe joint pains. The rash seemed an allergic one, so the penicillin formula, considered a likely cause, was not given again.

(Months later the man was given penicillin in the same manner and dosage for one dose for an infection not related to the tularemia, and no reaction occurred.) The patient still refused to go to the hospital or laboratory but was unable to work. The rash and joint distress stopped following some benadryl. The patient returned on June 17 and upon close questioning (also possibly because distress of the itching rash had greatly impressed him) admitted that on June 8 and 9 he had had chilly sensations and fever, slight headache, general indisposition, and a definite diarrhea. Even more significantly, he recalled that on June 2 he had skinned a jack rabbit. Then he did go to the laboratory, and agglutination was positive 1:160 for tularemia. Following that, the laboratory of the California State Health Department and also the laboratory of the Tulare County Health Department reported positive for tularemia with titers of 1:160.

In the meantime the primary sore on the hand had fully ulcerated and was fairly well along toward healing. The buboes had both enlarged and become more tender. The patient's general condition was fairly good, but the axilla and arm caused considerable distress. The lymph node in the arm attained about 3 by 4 cm. in diameter with swelling of the surrounding tissue in addition; the axillary bubo was smaller, but both were enlarging.

Streptomycin was impossible to obtain here privately at that time, so I arranged to get the patient into the Tulare County General Hospital and urged that streptomycin be obtained, if possible, through that institution. I advised that it be given according to the ideas of Foshay and Pasternack.[6] The patient delayed a number of days before entering the hospital on July 3, the 25th day of the illness. He was given sulfadiazine. There was no streptomycin yet obtainable. The next reported titer was 1:160. The titer on blood taken July 17 was 1:320. About 22 days after hospitalization began, streptomycin was obtained and given by intramuscular injections of 1 gm. divided into eight doses a day for 40 doses.

On July 15 an abscess of the axilla had been incised and a large amount of green pus was expelled, drainage from this opening continuing to the end of hospitalization. While



Figure 1



Figure 2

in the hospital the patient felt well and his temperature fluctuated between 97° and 99.4°F. After drainage of the axillary abscess the swelling slowly subsided in that area but little change was seen in the arm swelling until streptomycin was started, when it began to subside. On August 17 a fluctuant area on the medial side of his arm was opened and some thin yellow fluid expressed. On October 17 this last-mentioned wound still showed a slight watery discharge, which the patient states ceased very shortly thereafter. The patient left the hospital on July 30 and went to work on August 15. The leukocyte count which had been 15,750 in early July dropped to 11,000 in early August. Incidentally, in February, 1947, leukocytes numbered 11,400, hemoglobin was 75 per cent, erythrocytes numbered 4,420,000, urine was normal, and the blood showed a positive agglutination titer for tularemia 1:320. The patient looked and said he felt well.

CONCLUSION

The entire subject of tularemia has many important phases, but it is especially interesting to call attention to two of them. First, that tularemia seems to be rare in Tulare County, California. Second, there is accumulating evidence which thus far strongly suggests that streptomycin arrests tularemia in a high percentage of cases, especially if used in the acute stage, although there is some evidence of its later usefulness, and that at least in the light of recent reports it has lighted the way toward new possibilities.

Valuable assistance was given in the preparation of this article by I. M. Stevens of the California State Department of Public Health, Inez Gray of the Tulare County Health Department, and Dr. Robert P. Klinefelter of the Tulare County General Hospital.

REFERENCES

1. Andrews, George Clinton: Diseases of the skin, ed. 3, Philadelphia, W. B. Saunders Company, 1946, pp. 397-400.

2. Beckman, Harry: Treatment in general practice, ed. 5, Philadelphia, W. B. Saunders Company, 1945, pp. 329-330.

3. Christopher, Frederick: A textbook of surgery, ed. 4, Philadelphia, W. B. Saunders Company, 1945, pp. 73-77 (Tularemia: David C. Straus, contributor).

4. Cohen, Richard B., and Lasser, Richard: Primary tularemic pneumonia treated with streptomycin, J.A.M.A., 131:1126-1127 (Aug. 3), 1946.

5. Crossen, Harry Sturgeon, and Crossen, Robert James: Diseases of women, ed. 9, St. Louis, The C. V. Mosby Company, 1941, p. 311.

6. Foshay, Lee, and Pasternack, A. B.: Streptomycin treatment of tularemia, J.A.M.A., 130:393-398 (Feb. 16), 1946.

7. Gordon, Abraham, M.: Streptomycin in tularemia, J.A.M.A., 132:21-22 (Sept. 7), 1946.

8. Howe, Calderon, Coriell, Lewis L., Bookwalter, H. L., and Ellingson, H. V.: Streptomycin treatment in tularemia, J.A.M.A., 132:195-200 (Sept. 28), 1946.

9. Nelson, Waldo E.: Mitchell-Nelson textbook of pediatrics, ed. 4, Philadelphia, W. B. Saunders Company, reprinted 1947, pp. 393-395 (Tularemia: William L. Bradford, contributor).

10. Peterson, R. L., and Parker, R. R.: Tularemic pneumonia: treatment with streptomycin, Public Health Reports, 61:1231-1234 (Aug. 23), 1946.

The Treatment of Epilepsy with Methylphenylethyl Hydantoin (Mesantoin)

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GREAT progress in anti-convulsive therapy has been made in recent years. With the development of experimental techniques for measuring convulsive thresholds [7,9] and the widespread awakening of interest in the clinical treatment of convulsive states,[3] a number of anti-convulsive agents have been found and tested. Dilantin remains by far the most important of these new agents. Nevertheless, dilantin possesses definite limitations, both with respect to its efficacy in the convulsive states of many patients and because of its toxic effects. When, therefore, another hydantoin derivative of experimental promise was made avaliable in 1945,* it became a matter of considerable interest to us to evaluate its clinical potentialities. The following report presents our experiences in the past two and one-half years with methylphenylethyl hydantoin (mesantoin) in 75 patients.

Several recent reports [2,4,10] on methylphenylethyl hydantoin indicate that the toxicity of this agent is relatively slight and that it possesses strong anti-convulsive properties in convulsive states of the grand mal and psychomotor types.[2] A more detailed consideration of these reports is presented in the Discussion in connection with a comparative analysis and evaluation of the results of this study.

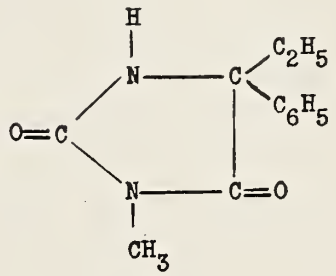
MATERIAL AND METHODS

Methylphenylethyl hydantoin (mesantoin) is 3-methyl-5, 5-phenyl-ethyl-hydantoin. The structural formulas of this hydantoin compound and of the sodium salt of diphenylhydantoin (dilantin) are shown in Figure 1.

Comparative studies on the anti-convulsive and toxic action of methylphenylethyl hydantoin have been made in experimental animals by Swingard and Goodman.[10] These authors state that this agent has a protective index (ratio of toxic dose to protective dose) of 12, as compared with an index of 2 for sodium diphenyl hydantoinate. Mesantoin raised the convulsive threshold of normal rats to electric shock by 27 per cent, whereas they obtained only a 2 per cent change with sodium diphenyl hydantoinate.

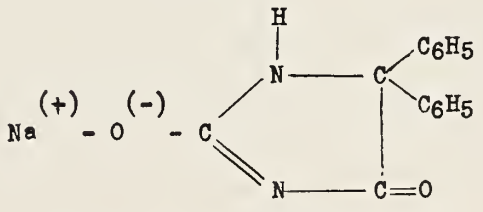
Aside from this, the slow absorption of mesantoin, and the studies of Von Fischer and Staub [11] on the distribution and elimination of ethylphenyl hydantoin, little is known as to the physiology, biochemistry or pharmacological mechanism of action of the hydantoin on the central nervous system. Although clinically, the hydantoins have but a slight depressant effect on the brain, their anti-convulsive action and their related beneficial effect on behavior disorders of childhood [5,8] and on the behavior of many epileptics is striking.

The 75 patients with convulsive states included in this study were selected because of their failure to respond to other therapeutic measures, including a trial of dilantin, or because they had demonstrated evidence of dilantin toxicity, which made it impractical to use this anti-convulsive agent either at all or in doses adequate to control their convulsive states. The group consisted of 48 patients with convulsive states of undertermined origin (idiopathic) and 27 patients with symptomatic or secondary convulsive disorders, including 18 with Jacksonian convulsive states. Routine clinical studies, including a history and physical and neurological examinations were obtained in all patients. Electroencephalograms were



3-methyl-5,5-phenyl-ethyl-hydantoin

(Mesantoin)



Sodium diphenylhydantoinate

(Dilantin Sodium)

Figure 1.— Structural formulas of methyl-phenyl-ethyl-hydantoin (Mesantoin) and sodium diphenylhydantoinate (Dilantin Sodium).

Read before the section on Neuropsychiatry at the 76th Annual Session of the California Medical Association in Los Angeles, April 30-May 3, 1947.

From the Department of Surgery, University of California Medical School, San Francisco, California.

* Courtesy of the Sandoz Chemical Works, Inc., New York, N. Y.

obtained on all patients. Pneumoencephalograms were performed on 45 patients.

Combined forms of seizures occurred in 31 of the 49 patients with essential epilepsy and in 17 of the 27 patients in the secondary or symptomatic group. Altogether 135 forms of convulsive states occurred in this group of 75 patients. Their classification is presented in Table 1.

TABLE 1.—*Types of Convulsive States Studied in 75 Patients*

Convulsive State	Primary (Ideopathic) No.	%	Secondary (Symptomatic) No.	%	Total
Petit Mal	35	42	13	25	48
Psychomotor	8	10	6	11	14
Grand Mal	40	48	15	29	55
Jacksonian	0	0	18	35	18
Total	83	100	52	100	135

The severity of convulsive involvement was graded as either moderate or marked, no slight cases being included in the group owing to the method of selection of patients. Of the patients with primary and secondary types of convulsive disorders, 81 per cent and 82 per cent, respectively, were considered to have severe convulsive disorders.

In all instances, mesantoin was added without altering other therapeutic measures that might influence the convulsive state. For this reason, the pure hydantoin derivative was used rather than Hydantal,† a preparation containing both phenobarbital and mesantoin. Standardization of the therapeutic regimen, prior to the time mesantoin was added, included control of the water balance (slight dehydration) and acid-base balance (neutral to slight acidosis), elimination of alcohol, stimulants and foci of infection, adequate bowel regulation, and regulation of environmental factors insofar as was practical. The optimal dose of other therapeutic agents, such as mebarol, phenobarbital, tridione, glutamic acid, etc., was established prior to the addition of mesantoin, as mentioned, and maintained at the same level, in order to facilitate evaluation of the anti-convulsive action of methylphenylethyl hydantoin.

The hydantoin derivative was added in small doses, 0.1 gm. one, two, or three times per day, depending upon the size and age of the individual and the dose of dilantin for which it was being substituted. Subsequently, the dose of mesantoin was gradually increased until spells were controlled, toxic effects developed, or no further benefit was obtained by increasing the dose. The dose in adults averaged 0.3 gm. with occasional patients receiving as high as 0.6 gm. per day.

RESULTS

In order to facilitate an analysis of the therapeutic value of mesantoin, its effects have been classified in four categories as follows:

1. *Toxic effects* varied considerably in the seven patients in whom they were observed. Subjective complaints included headaches, nausea, listlessness, drowsiness, and dizziness. "Nervousness" and "a sense of fullness in the head" were additional complaints, each occurring in one instance. Objective disturbances consisted of vomiting, fever, rash, and lethargy. Nightmares, accentuation of the convulsive state, and an aplastic anemia resulting in death (see Discussion) were each observed in single instances. The hydantoin derivative was discontinued in all seven patients because of one or more of the above undesirable effects.

2. *No Effect:* This group includes convulsive disorders in patients in whom neither toxic nor beneficial effects could be detected.

3. *Slight to Moderate Effect:* This group comprises those convulsive states which were definitely benefited by the addition of mesantoin or its substitution for dilantin, but in which the effect was of moderate degree and could not be classified in the next group.

4. *Great Effect to Control:* This group includes convulsive states which were completely or almost completely controlled over a period of six or more months of observation in patients with convulsive disorders of severe degree which had been controlled but poorly by other measures. The period of observation in "controlled" patients necessarily depended upon the frequency of spells. Those patients whose spells were infrequent were observed over longer periods and were not considered "controlled" until they had been "protected" against at least 20 expected spells. The occurrence of rare spells in those patients greatly benefited by mesantoin was explained in most instances by their deviation in some respect from the prescribed regimen.

Table 2 shows the therapeutic effects obtained with methylphenylethyl hydantoin in the 75 patients included in this study. The beneficial effects were not subdivided into the categories "Slight to Moderate" and "Great Effect to Control" in as much as a high percentage of the patients had combined forms of convulsive states which responded in different degree depending upon the types of convulsive state involved. Many patients presenting both grand and petit mal, for example, showed striking benefit insofar as their major seizures were concerned, but little or no benefit on their minor spells. Correspondingly, an analysis with respect to the type of convulsive disorder rather than with respect to the patient seemed essential to present the results of this study in fair perspective. On this basis the results obtained in the

TABLE 2.—*The Anti-Convulsive Effects of Methyl-Phenyl-Ethyl-Hydantoin in 75 Patients with Convulsive States*

Convulsive State	Therapeutic Effects: Toxic No.	%	None No.	%	Beneficial No.	%	Total
Primary (Idiopathic)	3	6	6	13	39	81	48
Secondary (Symptomatic)	4	15	2	7	21	78	27
Total	7	9	8	11	60	80	75

† Sandoz Chemical Works, Inc., New York, N. Y.

TABLE 3.—*The Therapeutic Effects of Methyl-Phenyl-Ethyl-Hydantoin in Various Types of Convulsive States*

	Therapeutic Effects								
	Toxic		None		Slight and Moderate		Great and Controlled		
Convulsive State	No.	%	No.	%	No.	%	No.	%	Total
Petit Mal	6	13	26	54	9	19	7	15	48
Psychomotor	1	7	2	14	4	29	7	50	14
Grand Mal	5	9	6	11	13	24	31	56	55
Jacksonian	2	11	2	11	4	22	10	56	18
Total	14	10	36	27	30	22	55	41	135

TABLE 4.—*The Therapeutic Effects of Methyl-Phenyl-Ethyl-Hydantoin in Primary and Secondary Types of Convulsive States*

	Therapeutic Effects								
	Toxic		None		Slight and Moderate		Great and Controlled		
Convulsive State	No.	%	No.	%	No.	%	No.	%	Total
Primary (Ideopathic)	5	6	24	29	17	20	37	45	83
Secondary (Symptomatic)	9	17	12	23	12	23	19	37	52
Total	14	10	36	26	29	22	56	42	135

135 types of convulsive states found in the 75 patients of this study are shown in Tables 3 and 4. Table 3 shows the therapeutic effects of mesantoin in the various types of convulsive states regardless of their etiology. Table 4 shows the results when the types of seizures are grouped in accordance with their primary and secondary clinical classification.

From Table 4 it may be seen that the overall effect of the hydantoin derivative is essentially the same, regardless of etiology. An analysis according to the types of spells (Table 3) shows that the results are essentially comparable, except for the degree of benefit obtained in petit mal as opposed to the other types of spells. Fifty to 56 per cent of the convulsive states other than petit mal were markedly benefited or controlled, whereas only 15 per cent of petit mal seizures were markedly benefited. Since the incidence of petit mal was 42 per cent and 25 per cent in the primary and secondary groups, respectively, and the benefit derived from the hydantoin derivative was essentially the same in the primary and secondary groups or, if anything, slightly greater in the primary group (Table 4), it is obvious that the relatively poor effect of the derivative on petit mal cannot be explained on an etiological basis. An analysis of the data from the standpoint of the age incidence of petit mal shows that the relatively poor results obtained in this condition with the hydantoin might be explained only in part on this basis. The incidence of petit mal and other forms of convulsive disorders in the two age groups 1-20 years and 41 or more years, is shown in Table 5. The relative therapeutic effectiveness of the derivative in these same age groups is shown in Table 6. This same point may be stated in another way, namely, that the better results obtained with the derivative in adults can be explained only partially by the slightly lower incidence in the adult group of petit mal, in which condition the hydantoin proved less effective.

TABLE 5.—*Incidence of Petit Mal and Other Forms of Convulsive Disorders in Young and Old Age Groups*

	Petit Mal		Other Convulsive States		
Age Group	No.	%	No.	%	Total
1-20 years	23	38	38	62	61
41 years and over	8	32	17	68	25

TABLE 6.—*The Therapeutic Effectiveness of Methyl-Phenyl-Ethyl-Hydantoin in Young and Old Age Groups*

	Therapeutic Effects						
	Toxic or No Effect		Slight and Moderate		Great and Controlled		
Age Group	No.	%	No.	%	No.	%	Total
1-20 years	24	38	13	21	26	41	63
41 years and over	5	22	2	9	16	69	23

DISCUSSION

Because of the method of selection of patients for this study, it is difficult to obtain a fair evaluation of the therapeutic value of mesantoin in the convulsive states. However, the fact that only 9 per cent of this group developed toxic symptoms, whereas 47 per cent of the same group had shown toxicity to dilantin, is impressive. Likewise, it is striking that only 11 per cent did not show some benefit from the hydantoin derivative, whereas 53 per cent of the group previously had not been benefited by dilantin. These results, in combination with the high percentage of convulsive states (42 per cent) that were either greatly benefited or completely "controlled" clearly indicate that methylphenylethyl hydantoin is an agent of relatively great therapeutic value and low toxicity. It is entirely possible that even more striking results might have been obtained in an unselected group of patients with convulsive states. It seems reasonable to conclude that mesantoin is a valuable substitute for dilantin when the latter proves toxic or inadequate, and in general use on unselected patients may prove as effective as dilantin or even more so.

The toxicity of the hydantoin derivative cannot be evaluated from this study. Nearly half of the group selected for the study had proved toxic to dilantin. Of the seven patients who proved toxic to

the derivative, four had previously developed a toxic reaction to dilantin. Although it is obvious that one may not draw conclusions from such limited data, certain points are worthy of comment in this connection. The derivative was added to a regimen that previously had not proved toxic, or substituted for dilantin without alteration of the other aspects of the regimen after the dilantin had proved toxic or of no benefit. In each instance, the derivative was added in relatively low doses and increased cautiously. The patients were warned to discontinue the "new medicine" at once if any alarming symptoms developed and to report immediately such occurrences. It is conceivable that except for this cautious approach the incidence of toxicity might have been appreciably higher. In most patients, doses of 0.2-0.4 gm. of the derivative per day were used. Higher doses (up to 0.6 gm. per day) were resorted to in only a few instances.

That the derivative may be dangerously toxic in rare instances is indicated by the following case report:

A single woman 26 years of age had suffered from a severe convulsive disorder of the petit and grand mal types following a head injury and the removal of a "blood clot" at the age of ten months. Weakness of the right hand and "knee" slowly improved as the child developed and there were no further spells until the age of eight years, when petit mal spells were noted and increased in frequency to three or four per day. A pneumoencephalogram at the age of 12 years had been reported as normal.

Right Jacksonian seizures occurred when she was 14 and 15 years of age. The attacks were rare thereafter until she was 18 years of age, when they occurred some three or four times a day. At 22 years of age she was placed upon phenobarbital and the seizures diminished in frequency to two or three per month.

Past History: Non-contributory, aside from pneumonia twice in childhood.

Family History was negative for convulsions and migraine.

Physical and Neurological examinations were essentially normal aside from (1) an old scar in her left temporoparietal region; (2) slight underaction of the right lower face; (3) deviation of the tongue to the right; and (4) slight weakness of the right grip.

X-rays of the skull showed an irregular area of decreased density in the lateral portion of the left parietal bone, which was not associated with vascular markings and which was interpreted as a "defect . . . which may be due to a leptomeningeal cyst," but which was probably an old burr hole.

Electroencephalograms appeared within the limits of normal aside from suggestive focal changes in the temporo-occipital and possibly other adjacent areas on the left.

Routine laboratory studies were normal.

A diagnosis of convulsive state ot post-traumatic origin was made and the patient was placed upon a regimen of phenobarbital, 0.06 gm. t.i.d., and dilantin, 0.1 gm. b.i.d. Although this helped to some degree, the patient still experienced two or three seizures per month. Institution of a restricted fluid intake, an acid-ash diet, bowel regulation, elimination of stimulants, etc., did not greatly alter the results. The substitution of mebarol, 0.1 gm. q.i.d., for the phenobarbital produced no marked alteration of the convulsive state, but resulted in a more alert, cooperative, and active patient.

The hydantoin derivative, 0.1 gm. t.i.d., was next substituted for the dilantin, other factors being maintained constant. This greatly benefited the patient's condition as indicated by the fact that there were only one or two slight spells per month. A severe attack of scarlet fever was associated with one more severe seizure.

Six months later, in an effort to achieve a more complete control of the convulsive disorder, the dose of the derivative was increased to 0.1 gm. q.i.d. The dose of mebarol was not changed. The patient did well for six weeks. Menses occurred in apparently normal fashion during this six-week period and lasted from three to four days. Prior to this she had not menstruated since the severe attack of scarlet fever five months earlier. Six weeks after the increase in the dose of the derivative, seven and a half months after the derivative therapy was initiated and without other known cause, vaginal bleeding began. This persisted and within a week resulted in a severe anemia. Hemorrhagic spots approximately ½ inch in diameter appeared in the skin of the body. She was hospitalized.* Physical examination showed, in addition to marked pallor, the hemorrhagic spots, and vaginal bleeding, a systolic murmur in the aortic area and a small area of tenderness over the left adnexal region. The blood count showed 1,140,000 erythrocytes, 2,500 leukocytes, 23 per cent hemoglobin, marked hypochromia and a differential count of 2 polymorphonuclear cells and 98 lymphocytes. The color index was .73 and .86 on two successive days. Her blood was type IIA and Rh negative. The clotting time was 5 minutes, the bleeding time 11½ minutes. The prothrombin time was 100 per cent of normal. Kahn and Kolmer tests were negative. Blood cultures showed no growth in 48 hours. In spite of daily blood transfusions, bleeding continued and subconjunctival hemorrhages and ecchymosis of the eyelids developed on the third day of hospitalization. Daily blood counts showed no essential change in the blood picture during the period of hospitalization. On the fourth hospital day extensive retinal hemorrhages developed. The temperature averaged 104.6° to 106° F. The patient died five days after she was hospitalized. The final diagnosis was "aplastic anemia." Autopsy was refused.

This patient's course, with delayed, sudden onset and rapid progression to a fatal termination in spite of all supportive therapy, is similar to that of the patients reported by Harrison, Johnson and Ayer [3] and Mackay and Gottstein.[6] The patient of Harrison, et al., had received mesantoin as well as tridione.

Comparison of the results obtained in this study with the results of others indicates certain salient parallels and differences. The drowsiness and skin rash reported by Kozol,[2] Lennox [4] and others were encountered rarely in the present series. This is presumably explained by the fact that mesantoin was started in low doses, only gradually increased, and but rarely employed in doses above 0.4 gm. per day. As Kozol has stated, these effects can usually "be eliminated or obviated by gradual increases in dosage."

Sixty-five per cent of Kozol's patients "with predominant grand mal" and 78 per cent (seven out of nine) "with predominant psychomotor" seizures were substantially improved. In the present study 80 per cent of the grand mal seizures and 79 per cent of psychomotor seizures were benefited. The difference of results in grand mal are probably more apparent than real and explained by the difference

* Information on the terminal phase of this patient's case history was obtained through the courtesy of Dr. C. Y. Gates and the Mary's Help Hospital.

in classification or grouping. Whereas Kozol considers "patients with predominant grand mal," the grouping in this study, for reasons previously mentioned, was made on the basis of the type of convulsion rather than the predominant type per patient.

Sixteen patients with petit mal appeared to be benefited by the addition of mesantoin. Only seven of this group, however, were markedly improved, so that considering the complexities of the study, one is not justified in drawing conclusions from this limited experience.

Perhaps the biggest difference between the present series and the other studies to which reference has been made, lies in the methods of treatment. Whereas Lennox used comparable doses without other anti-convulsive agents and Kozol used some combinations of drugs but higher doses of mesantoin, great stress was laid in the present series on obtaining the maximal benefit possible from other anti-convulsive agents. One or more of the following anti-convulsive agents were used in combination with mesantoin: phenobarbital, mebarol, delvinal, tridione and glutamic acid. The optimal doses of these agents were worked out before mesantoin was tried and dosage of them maintained as mesantoin was added. This was done not only to obtain as much benefit as possible for the patient, but to maintain the conditions as constant as possible. Regulation of the water and acid-base balance, etc., was also undertaken as part of the standardized regimen. This appears to be the only possible explanation for the fact that results comparable to those obtained by Kozol were obtained in the present study with doses of mesantoin considerably lower than those he employed. The fact that the results obtained in this study are appreciably better than those reported by Lennox would seem best explained on this same basis, since the dose levels of mesantoin employed by Lennox were approximately the same as those used in this series.

CONCLUSIONS

1. Methylphenylethyl hydantoin was used in 75 patients with convulsive states in whom the sodium salt of diphenylhydantoin had proved ineffective or toxic. Other anti-convulsive agents used with mesantoin were given in the same optimal doses and combinations that had been worked out prior to the addition of the new agent. Other conditions were standardized (the regimen included regulation of other factors possibly influencing convulsive reactivity, such as the water and acid-base balance, etc.) and were maintained in order to facilitate the evaluation of the new hydantoin derivative.

2. Toxic symptoms appeared in seven patients and the hydantoin derivative produced no appreciable benefit in an additional eight patients. Eighty per cent of grand mal seizures were improved (24 per cent moderately and 56 per cent greatly), 78 per cent of Jacksonian seizures were helped (22 per cent moderately and 56 per cent greatly), and 79 per cent of psychomotor seizures were benefited (29 per cent moderately and 50 per cent greatly). Sixteen patients with petit mal appeared to derive some benefit but the improvement was marked in only seven of these. The limited results on petit mal in addition to the complexity of the study forbid any final evaluation of the hydantoin derivative in petit mal. These results are comparable with the results obtained in other studies on this new anti-convulsive agent. Differences are discussed.

3. The great value of mesantoin in convulsive states other than petit mal and its relatively low toxicity, suggest that it will prove a valuable substitute for dilantin, and in unselected patients may prove as effective as dilantin or even superior to it.

4. Although of low toxicity in general, if used cautiously, mesantoin may be associated with alarming toxic symptoms. One fatal case of aplastic anemia in this series is reported.

DISCUSSION BY EUGENE ZISKIND, M.D., LOS ANGELES

No medicinal remedy, to date, has been devised that will completely repress the attacks in the majority of epileptic patients, although it is equally true that almost all are helped to some degree. The practical problem in therapy, therefore, is to find the drug, or combination of drugs, which will give the greatest degree of control. This is a time consuming, tedious process in most instances. Often it takes a matter of years, and probably in many cases the optimum combination of drugs specific to the individual is never even reached in the cumbersome, prolonged, trial and error procedure which is present day practice. It is therefore particularly significant that Dr. Aird's report covers a two and one-half year period with 75 cases.

It is furthermore logical that a new remedy be tried first only where others have failed. Combination therapy is often more successful than treatment with one drug, since it apparently is true that the anti-convulsant effects may be additive or synergistic, whereas the side reactions and intolerance of each of the combined drugs need not be. Hence Dr. Aird's demonstration of enhanced therapeutic benefit from the addition of mesantoin to maximum other dosage gives this drug decided practical value. Since the studies of Aird, Kozol, and Lennox have each further shown that mesantoin has been of value in cases where the other drugs had to be discontinued, one can say the time has now arrived where it will be legitimate to start new cases out with mesantoin alone so that comparisons can be made directly with dilantin and phenobarbital.

Although we are engaged in a comparative project with the group at the Cedars of Lebanon Hospital with Drs. N. Bercel, B. Finesilver and P. Solomon, on the effect of this drug, I will comment only on the 41 cases seen by Dr. Somerfeld and myself in private practice since July of 1946. Most of our cases were transferred entirely, though gradually, to mesantoin after they had not obtained complete control with maximum dosage of other drugs. A few patients were given mesantoin to the point of tolerance, 1 gm. (9 tablets), and many received 0.6 gm. Our experience has been too brief in many of our cases to place too much reliance on the statistical analysis. One third were definitely better on mesantoin than on any other medication tried, seven of these having no attacks during a greater period than the period of freedom from seizure immediately preceding the change to the new drug. One fourth of the group (ten cases) had the drug discontinued and the remainder included many who were improved but the duration of the new therapy was too short to be signficant.

Our record of toxic reactions may be of interest: agranulocytosis (one case going on to recovery after cessation of the drug); pronounced visible enlargement of the cervical

glands (two cases with reproduction in each instance after a free interval, by readministration of the drug); interference with sexual function or desire (four cases); rash (one case); drowsiness (four cases). On the other side of the picture should be mentioned the feeling of well-being in patients helped most by the drug. In one instance a child with marked behavior disturbance underwent such dramatic improvement that he seems to be an entirely different individual. Likewise, the repeated disappearance of gum hypertrophy from dilantin is very gratifying.

All told, mesantoin would appear to be a formidable addition to the therapy of epilepsy, and Dr. Aird's timely, well thought out and comprehensive contribution, in addition to those of his predecessors, now opens the way to the final stage of analysis of this drug, namely, the comparison of its activity on a free trial in other than the worst cases.

REFERENCES

1. Harrison, F. F., Johnson, R. D., and Ayer, D.: Fatal aplastic anemia following use of tridione and a hydantoin, J.A.M.A., 132:11-13 (Sept. 7), 1946.

2. Kozol, Harry J.: Treatment with new drug: 3-methyl 5, 5-phenyl-ethylhydantoin (phenatoin), Amer. J. Psychiat., 103:154-157 (Sept.), 1946.

3. Lennox, W. G.: Science and seizures, Harper Brothers, New York, 1941, p. 258 illustration.

4. Lennox, W. G.: Two new drugs in epilepsy therapy, Amer. J. Psychiat., 103:159-161 (Sept.), 1946.

5. Lindsley, D. B., and Henry, C. E.: Effects of drugs on behavior and electroencephalograms of children with behavior disorders, Psychosom. Med., 4:140-149 (April), 1942.

6. Mackay, R. P., and Gottstein, W. K.: Aplastic anemia and agranulocytosis following tridione, J.A.M.A., 132:13-16 (Sept. 7), 1946.

7. Merritt, H. H., and Putnam, T. J.: New series of anticonvulsant drugs tested by experiments on animals, Arch. Neurol. & Psychiat., 39:1003-1015 (May), 1938.

8. Putnam, T. J., and Merritt, H. H.: Dulness as epileptic equivalent, Arch. Neurol. & Psychiat., 45:797-813 (May), 1941.

9. Spiegel, E. A.: Quantitative determination of convulsive reactivity by electric stimulation of brain with skull intact, J. Lab. and Clin. Med., 22:1274-1276 (Sept.), 1937.

10. Swinyard, E. A., Toman, J. E. P., Goodman, L. S.: The effects of body water and electrolyte shifts on experimental convulsions, Federation Proceedings, 5:205 (Feb.), 1946.

11. Von Fischer, H., and Staub, H.: Das Schucksal des Nirvanols im Hundeorganismus nach stomachaler und nach intravenöser Verabreichung, Helv. Physiol., Acta 3:135-202 (June), 1945.

Acute Puerperal Mastitis — A Review

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A REVIEW of the literature on acute puerperal mastitis discloses that interest in the mammary gland has not adequately extended to mammary afflictions in the postpartum period. Only 74 significant papers since 1649 were found upon which to report. Ambrose Paré first reported the use of alum-water and lead nipple shields in the treatment of afflictions of the postpartum breast. Unfortunately, little progress has been made since then in relieving the discomfort of infantile traumatization of fissured nipples. Therefore an attempt will be made here to present in as logical form as possible the progress that has been made in ministering to this important complication of breast feeding. The papers concerned in this review have been combined in an effort to present a logical report with some semblance of continuity.

Initially, it may be of interest to investigate the incidence of mastitis to determine how much of a problem this complication of the puerperium presents. Geschicter in his book on Diseases of the Breast quotes an average incidence of infection in the postpartum breast of 2 per cent with ½-1 per cent abscess formation. In a series of 4,568 obstetrical cases at Woman's Hospital and New York Infirmary for Women, reported by McIntosh.[11] there was mastitis in 3.3 per cent and abscess formation in 0.7 per cent. Dippel and Johnston [2] reported abscess formation in 0.55 per cent of 20,258 postpartum women. We, at the University of California Hospital have observed 79 cases of acute mastitis over the last ten years in 7,453 women after delivery, a percentage of 1.04; and abscesses developed in only three cases, which gives us an incidence of 0.04 per cent for that complication. Combining these results we find that there is an incidence of acute mastitis of 2.1 per cent, and that 27 per cent of those who have the disease develop breast abscesses. Hence, we see that the problem is of sufficient frequency of occurrence to warrant our careful attention.

The etiology, for purposes of discussion, can be considered under three headings; (1) predisposing factors, (2) specific micro-organisms involved, and (3) direct causative factors.

Under the first category, it seems that parity plays a definite role. McIntosh [11] reports that 59.2 per cent of her patients were primigravidae. Moon and Gilbert [12] report 75 per cent, while at the University of California Hospital 57 per cent of the cases were in women having their first child. As to race, there is little predeliction shown. Dippel and Johnston [2] report 55 per cent of their cases in white patients, while our cases showed a very slight tendency in the opposite direction: 1.1 per cent of our negro patients developed mastitis as compared with 0.94 per cent of our white patients. A series of interest,[4] consisting of 1,176 cases reported by a Scottish clinic, shows that 77.6 per cent of cases of mastitis developed in hospitalized patients as compared with 22.4 per cent in cases delivered at home. Although I could find no statistics on this point pertaining to our own country, I should imagine the disparity would be much less; and probably reversed. Two factors to be mentioned are an increased incidence in winter and spring, and a supposed predeliction of the disease for blondes or those having red hair. Hence, the most likely candidate for mastitis would seem to be a blond or redheaded primipara delivered in the winter or spring under hospital care.

INFECTING ORGANISMS

In the second category, the specific organism involved, we have to do with a familiar group of bacteria. The fact that this familiar group of bacteria is a frequent causative agent of mastitis may not be mere coincidence. By far the most common offender is the staphylococcus aureus. It was found in 73 per cent of a series at Johns Hopkins.[2] and in approximately 75 per cent of Smith's series.[13] The less common organisms found, in order of their frequency, are staphylococcus albus, a normal skin saprophyte, streptococcus hemolyticus, often followed by streptococcus viridans. Such entities as tuberculous and actinomycotic abscesses must be mentioned only in passing. The staphylococcus aureus infection presents the usual picture of a fulminating local process with only moderate systemic reactions, but it is the most likely to proceed to abscess formation. The staphylococcus albus, while second in frequency, causes perhaps the mildest case of mastitis, causing mothers as a rule little more discomfort than badly engorged breasts. As a matter of fact, staphylococcus albus is found in the milk ducts of 50 per cent of normally lactating women, and causes trouble only when stasis and trauma are added factors. The streptococcus hemolyticus is much rarer, with a local reaction of mild degree that seldom leads to abscess formation, but which frequently results in violent systemic reactions. The occasional death reported in the literature from mastitis has been due to infection with this organism. There have been, incidentally, no cases reported of maternal death from mastitis alone since the advent of the sulfonamides.

In our third category of causative factors are mainly incidents related to lactation and nursing. The first of these is stasis, which was well illustrated by the war work of Klahn in Germany,[9] who divided a series of patients into two groups. In the first group infants were nursed in the usual manner resulting in more or less incomplete emptying of the breasts. In the other group, breasts were emptied routinely, and

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as completely as possible, by breast pump at each normal feeding period. The first group had an incidence of mastitis twice as high as the second. Such a phenomenon is easily comprehensible when one compares it with the role of residual urine in the etiology of cystitis. Factors contributing to stasis are long feeding intervals, superabundant secretion, blocking of the ducts due to improperly supported breasts, and decreased nursing due to prematurity of maternal pain in nursing. It should be noted that so-called caked breasts do not constitute engorgement. The caking, as shown by Hicken and Taylor,[7] is due not to luminal distention, but to edema of the acinar cells caused by venous and lymphatic engorgement. The danger, therefore, is not that the involved portion of the breast will become infected, but that pain and soreness will prevent the mother from allowing the infant completely to empty uninvolved segments of the breast, which makes them less resistant to infection. Hence attention should be directed toward complete emptying of the unaffected portion, whereupon the so-called caking will relieve itself promptly.

Secondly, in this category, fissures and cracks should be considered. They are dangerous from two standpoints: the pain caused by their presence leads to maternal limitation of nursing and hence stasis, and they offer an excellent avenue of ingress for bacteria. Heaton,[6] Moon and Gilbert,[12] Hicken, and Carter,[1] all believe fissures play a large part in causing mastitis, and this belief is well supported in our own series. Sixty-four, or 81 per cent, of our patients complained of moderate to severe pain upon nursing —a presumptive evidence of fissure—from 24 to 72 hours before developing actual mastitis. In 51 patients, or 64 per cent, the presence of actual fissures was mentioned in either the doctor's or nurse's notes about the same length of time before actual infection was demonstrated. Such evidence is suggestive only, in that cause and effect are reversed. More significant is the fact that 1,018 of the mothers in our series were noted to have developed fissures, 51 (or 5 per cent) of which proceeded to mastitis; while in the remaining 6,435 only 28 (or 0.44 per cent) were affected.

Trauma of suckling would seem to be an added factor in that it forces bacteria into the injured tissues, and at the same time adds more tissue damage. Some workers feel that instrumental and operative deliveries increased the incidence of mastitis. They reason from indirect evidence based on the facts that trauma in a potentially contaminated field may cause bacteremia, and that hematogenous mastitis is a reality, as shown by cases occurring in such diseases as typhus and dysentery. However, no statistics are offered to support either of these theses.

To sum up the etiologic factors, it may be said that they embrace many conditions which, according to data from the Scotch clinic again, are most likely to occur in combination when there is increased effort by the infant to obtain a sufficient meal at either the initiation or cessation of lactation, or with break in hospital technique accompanying the discharge of the patient from the hospital to the home.

From the pathologic standpoint there are two distinct types of mastitis, either of which converges into the typical clinical picture in 24 to 48 hours: the interstitial or superficial type, and the deep or glandular. In the former, streptococcal infection is most often a factor. The infection occurs through previously existent fissures involving the superficial lymphatics, yielding first an erythema, and later induration, as the process involves the deeper glandular structures themselves. Abscess formation is relatively rare. The latter type is dependent upon stasis for development, the glandular structures being involved first, leading to induration followed by erythema as the infection spreads from the glandular tissue proper to the surrounding lymphatics. As has been pointed out by Spindler and Dowdy,[5] the majority of abscesses develop in mastitis of this variety. It is evident that although the two types are usually indistinguishable 24 to 48 hours after onset, the differentiation is somewhat important from a standpoint of prognosis.

PATHOLOGICAL PHYSIOLOGY

Before discussing treatment, it might be well to review the pathological physiology of mastitis in order to have a better rationale on which to base therapy. Initial suckling by the infant often causes edema and petechial hemorrhages in nipple epithelium which is already thinned by hormonal changes of late pregnancy. Further suckling results in erosion with actual fissure formation. There are then two factors at work leading to trouble: (1) Maternal pain caused by the fissure often causes the mother to limit the completeness of nursing, thus producing stasis within the breast, while (2) further nursing tends to force bacteria into the injured and susceptible breast tissue. Depending on the predominant element, interstitial or glandular mastitis may develop. Either type tends to spread into the combined type. Then, depending on (1) the predominant organism, (2) initial type, as mentioned above, (3) type of treatment, and (4) the promptness of its institution, the process will either (1) resolve, (2) proceed to abscess formation, or (3) result in a metastatic bacteremia.

The clinical course of the disease is so familiar that only a few points need be mentioned. The onset of symptoms and signs of the disease vary. In the Johns Hopkins series[2] symptoms have been noted as early as the second postpartum day, and as late as sixteen and a half months after delivery. However, according to the consensus of opinion, the onset is unlikely before the fifth day or after the twenty-second, with the highest incidence on the sixteenth postpartum day, which gives the typical inverted U-shaped curve on a chart. The University of California series, because of its size, exhibits a slightly more erratic curve. It shows occurrence from the first to the fifteenth day with a well marked peak on the seventh day postpartum. The only other point of interest in the clinical course of the disease is that marked systemic reaction is seen occasionally, with leukocyte counts as high as 31,000 and fevers of 105 to 106 degrees F. It is not unusual in these cases that breast

symptoms are minimal, so the disease entity should not be excluded from a differential diagnosis of a very ill patient on the basis that the breast findings are too insignificant to explain the marked constitutional reaction.

As in all disease, the best treatment of mastitis is prevention. Therefore, the first interest in the patient from this point of view should come in the prenatal period. Any defects, such as inversion of the nipples, should be corrected, and toughening the nipples for the task that lies ahead should be considered. All clinics agree to this, but there are many opinions as to the relative values of stilbesterol, massaging, ointments, and alcohol baths in effecting the desired result, and, as far as the author can determine, no statistics are available for study. At present, in the University of California Hospital we are prescribing stilbesterol ointment during the last six weeks of pregnancy for inverted nipples, and routine soap and water cleansing followed by alcohol baths for toughening the nipples.

Secondly, we must consider prophylaxis during actual nursing. This is primarily a matter of cleanliness and relative sterility which is effected by covering the nipples with sterile gauze between feedings and rinsing with sterile water before and after nursing. Other important considerations are directed toward prevention of fissure formation, and the methods are nearly as legion as the opinions are varied, with no very reliable research having been published on the relative efficacy of any. There are those who like alcohol baths for the nipples during the nursing period to toughen them and act as a mild antiseptic. The antagonists retort this only leads to brittle epithelium with additional fissure formation. These objectors to alcohol usually prefer various greasy ointments on the basis that they make the nipples more pliable and hence reduce the incidence of fissures. The majority of these ointments have as many disadvantages as the alcohol method, in addition to which they make excellent bacterial carriers. On culturing a sample of benzoin that had previously been applied routinely to breast dressings, the author obtained 107 colonies of varied micro-organisms, predominantly staphylococci.

Recently a cream has been developed that apparently embodies the antiseptic qualities of alcohol with the softening effect of ointments, and therefore should be ideal. This is 0.1 per cent 5-amino-acridine in a water soluble, absorbable base of 20 per cent carbowax and 80 per cent tween-sixty. The chemical itself shows its highest degree of activity against those organisms that most commonly cause mastitis. The base is absorbable, lending pliability to the nipple without the greasiness of other ointments; and, being water soluble, it is easily removed before the baby is put to breast.

On our own obstetrical service at present, before nursing the mother's nipples are rinsed with 70 per cent alcohol, followed by sterile water. After nursing, the nipples are rinsed with water only and covered with plain sterile gauze, which is then impregnated with amino acridine. Since the discontinuance of routine tincture benzoin nipple care, there has been an obvious decrease in fissure formation and nothing resembling acute mastitis.

Our third consideration is the treatment of choice in case fissures develop. As was noted in previously quoted reports, fissures are present in most patients for at least 24 hours before mastitis develops, and in the great majority of cases for a longer time. Data on cases at the University of California Hospital shows that 15.6 per cent of acute mastitis developed in less than 48 hours after fissure formation and 84.4 per cent in more than 48 hours after fissure formation. It is evident that the curve of lag between fissure formation and of actual infection remains relatively flat for approximately 48 hours, after which it rises steeply. Thus, it would seem reasonable that efforts to cure fissures should be made for 48 hours, after which the danger of mastitis should be considered too great to temporize. Nursing, therefore, should be abandoned at the end of this period and lactation discontinued.

Our policy when demonstrable fissures develop is to use glass nipple shields for 24 hours. If no improvement occurs, the infant is taken completely off breast for another 24 hours. If that does not result in marked improvement, the child is removed from breast entirely and the mother's breasts dried.

Acute puerperal mastitis occasionally develops despite efforts to forestall it, and intensive treatment then must be undertaken. Moon and Gilbert [12] in London have shown that for the infant's health it is necessary to remove the baby from breast if there is reasonable suspicion of mastitis. In their series in which the mothers nursed during the early phases of acute mastitis, infant morbidity from enteritis alone was 8 per cent and mortality 3 per cent. As to the mother, the breasts should be dried immediately to decrease stasis, volume of tissue, and functional activity, all of which tend to accentuate and perpetuate the infectious process. There seems to be little choice as to whether stilbesterol or testosterone is used for this purpose, although such enthusiasts as Soloman claim that testosterone results in more rapid action with a minimum of secondary filling. Snug binding is advocated, of course, with ice bags to serve the threefold purpose of decreasing pain, decreasing blood flow, and thus decreasing milk formation.

MEANS OF THERAPY

Therapy consists in the main of treatment with: (1) sulfonamides, (2) penicillin, and (3) x-ray. The sulfonamides were most disappointing in treating mastitis, notably because of the staphylococcus in the majority of breast infections. In addition they are almost totally worthless in the presence of abscess formation because of the large amounts of para-amino-benzoic acid present in such circumstances. The only time sulfonamides may be of value is very early in the infectious process and in full dosage.

Penicillin is not ideal, but is of excellent value in staphylococcus infections in contradistinction to the sulfonamides. However, it will seldom replace incision and drainage once an abscess has formed.

Its value is twofold: it gives a very high percentage of cures in early cases that have not progressed beyond the cellulitis stage, and it is useful in preventing the spread of the process once an abscess has actually formed. It must be remembered that it is important to use adequate dosage to get the infection under control as rapidly as possible, as staphylococcus aureus shows an amazing propensity to become penicillin-fast.

The most voluminous and enthusiastic reports of success in treating acute mastitis come from the roentgenologists. Treatment with radiation has been in vogue in Germany for some time, but the first American reports of interest date from 1940. The average technique is an exposure of 40-100 r in air each day for five days, the case being discarded as a failure if definite improvement does not occur in 48 hours. The physiological changes are reported to be a hyperemia with leukocytic attraction and leukocytic lysis, resulting in escape of abundant bacteriolysins, with an acceleration of the whole defensive metabolic process. The advantages that McIntosh, et al.,[10,11] report are that there is pronounced alleviation of pain almost immediately, the length of the illness is notably reduced, the percentage of abscess formation and the recurrence rate are decreased, and the cost as compared with that of chemotherapy and antibiotics is less. If abscess formation does occur, therapy is either by incision and drainage, or by aspiration and injection of penicillin.

To sum up the results obtained with various methods of treatment: The sulfonamides are least effective. In Nelson's series of 12 patients treated with sulfonamides, incision and drainage ultimately was necessary in nine cases with an average morbidity of 50 days. In McIntosh's series[10] (used for comparison with her series in which treatment was by radiation) abscess formation was reported in 18.7 per cent. Spindler and Dowdy[5] also have a series for comparison with the series in which irradiation was used, comprising 65 cases, in 30 per cent of which abscesses developed and average morbidity was 50.3 days. At the University of California Hospital in the past ten years 20 cases have been treated with the sulfonamides, and in only one (5 per cent) did an abscess develop. In all the series reviewed, the combined average of abscess formation in patients treated with sulfonamides was 44.7 per cent.

In Hodgekinson and Nelson's series[8] of 33 patients treated with penicillin, four (12.1 per cent) developed abscesses. In the 13 cases in the University of California Hospital in which penicillin therapy was used for acute puerperal mastitis, none developed this complication, giving a combined average of 8.7 per cent in which there was abscess formation.

The combined results of series reported by roentgenologists show that of 137 cases of acute puerperal mastitis treated with radiation, there was abscess formation in only four (3 per cent). We have treated no patients with radiation, hence have no basis for comparison.

Analysis of the combined results from the point of view of the relative importance of time lag between onset and the beginning of treatment, discloses that in the group treated with sulfonamides the time lag made less difference than it did in the groups treated with penicillin or radiation. In 27 patients treated in less than 24 hours after onset of symptoms, seven (22.4 per cent) developed abscesses, whereas abscesses developed in 13 (34 per cent) of 38 patients treated later than 24 hours after onset of symptoms—as would be expected from what we have previously learned about sulfonamides. In the series in which penicillin was used, time lag was more costly. Of 24 patients in which treatment was commenced in less than 24 hours none developed abscesses, whereas of ten treated later than 24 hours after onset, four (40 per cent) had this undesirable outcome. In the series in which radiation was used, abscesses developed in only two (1.9 per cent) of 103 patients on whom treatment was started within 24 hours of the onset of symptoms, while there were abscesses in two (5.8 per cent) of 30 patients not treated until after elapse of that interval. Hence it would seem that penicillin and radiation give similarly beneficial results, with penicillin the therapy of choice in the first 24 hours, following which it may be well to supplement that drug with x-ray.

As to treatment of abscesses that do develop, the only series of comparative data available is one reported by Fraser.[3] In that series, aspiration and penicillin injection were performed daily until cure was effected. The series comprised only 15 patients and the results were somewhat disappointing in that only three were cured by this therapy; in seven there was spontaneous drainage through the site of repeated puncture, and in five cases incision and drainage finally became necessary. Despite this, however, penicillin injection still seems to be the treatment of choice, for the morbidity was 19.6 days in those cases in which there was incision and drainage, as compared with 5.3 days for those cases in which drainage was spontaneous. Patients in whom the disease was resolved without drainage were well in four days.

In summary then, we may say that acute puerperal mastitis is a disease entity caused by the simultaneous occurrence of a pathogenic organism and disturbed factors of lactation in a predisposed individual. Once it has developed, a factor of paramount importance in treating the disease is early institution of therapy. The best therapy at present seems to be penicillin supplemented, if treatment is unfortunately begun late, by radiation therapy.

REFERENCES

1. Carter, Phillip J.: The care of the breast and its complications during pregnancy, Am. J. Ob. & Gyn., 14:81-84 (July), 1927.

2. Dippel, A. L., and Johnston, R. A.: Suppurative mastitis as complication of pregnancy and the puerperium, Am. J. Ob. & Gyn., 29:258-263 (Feb.), 1935.

3. Fraser, D. B.: Local treatment of acute mastitis with penicillin, Brit. Med. J., 1:523-524 (April 15), 1944.

4. Fulton, A. A.: Incidence of puerperal mastitis in an industrial town of 43,000 inhabitants, Brit. Med. J., 1:693-696.

5. Harvey, R. A., Spindler, H. A., and Dowdy, A. H.: Roentgen therapy as adjunct in the management of acute puerperal mastitis, S. G. & O., 80:396-403 (April), 1945.

6. Heaton, D. E.: Prevention and management of acute mastitis, Surg. Clin. No. Amer., 17:27-32 (Feb.), 1937.

7. Hicken, N. F., and Taylor, R. V.: Acute mastitis, Am. J. Surg., 48:553-560 (June), 1940.

8. Hodgekinson, C. P., and Nelson, R. E.: Penicillin treatment of acute puerperal mastitis, J.A.J.A., 129:269-270 (Sept. 22), 1945.

9. Klahn, J.: Mastitis und stillfahgkeit, Zew. J. Gynak., 61:2059-2061, 1937.

10. McIntosh, H. C.: Roentgen ray therapy during lactation, N. Y. State J. Med., 40:92-95 (Jan. 15), 1940.

11. McIntosh, H. C.: Roentgen treatment of puerperal mastitis, Med. Cl. No. Amer., 25:641-647 (May), 1941.

12. Moon, A. A., and Gilbert, B.: Acute mastitis of the puerperium, J. Ob. & Gyn. Brit. Emp., 42:268-282 (April), 1935.

13. Smith, Fred B.: A study of the predisposing causes of breast abscess, Am. J. Ob. & Gyn., 24:123-126 (July), 1932.

Emotional Factors in Obstetrical Practice

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THE experience of the war years in the study of the psychiatric casualty has added materially to our knowledge of neuroses and neurotic symptomatology. Even more important is the tremendous stimulation of interest in this field among non-psychiatrically trained medical men and the general public. Medical men have long recognized the need for a more practical application of psychotherapeutics, but have been handicapped by certain prejudices, poor ground work in their formal medical education in psychiatry, and the fact that the time and study now needed to prepare themselves is a formidable problem in the life of a busy physician. The interest of the general public is important in that the lay mind slowly is coming to recognize that psychosomatic illness is no more a stigma than any other illness and that the need for psychotherapy does not indicate that the patient has a psychosis. There is still much to be accomplished in this direction, however, for all too frequently we see both patient and family deeply offended by the suggestion that the difficulties of the patient are related to an emotional factor for which neither medicine nor surgery is indicated, but rather treatment by a competent psychotherapeutist.

The prejudices of medical men against the findings of the psychologists, especially the psychoanalytically trained psychiatrists, stem, in my opinion, from three sources:

1. The researches of Freud and of the many people who have confirmed and further developed his work create for us a picture of the human mind so bizarre and grotesque that it is with difficulty that the average individual can do other than ridicule their findings. We so wish to be rational or to appear to be rational that we ignore the fantastic workings of our minds as they are revealed, for example, in the dream that leaves us shivering with astonishment at our own depravity. But as the student of higher mathematics learns that two times two does not have to be four, so prolonged researches into the dynamics of human emotion demonstrate conclusively that, for example, one can both love and hate the same individual (and frequently does); that a woman may exhibit the most profound maternal instinct yet unknowingly have such a strong aversion to childbearing that pregnancy makes her dangerously ill.

2. These prejudices against what seem to be such fantastic and improbable concepts are augmented by the fact that the psychologist is a realist, not a moralist, in his appreciation of human instincts and drives. He sees the individual as a human being driven inexorably toward certain goals but constantly forced to compromise his true needs to the realities and restrictions of the particular culture in which he lives. Thus, in the person imbued with a deep religious morality, psychoanalytical concepts may create conflict and antagonism.

3. Few of us are perfectly adjusted personalities: we all have neurotic trends of greater or less degree, and when faced with a concept that makes us recognize an irrationality in ourselves, as well as in the patient, we turn away from it uneasy and offended. The preservation of our own egos too often takes precedence.

Despite the fact that there is still much honest skepticism about the value and practicality of this field of medical art, there is a steadily increasing growth in discussion groups and the presentation of studies on the subject of psychosomatic medicine, and many of us believe that this is one of the most important advances in medical practice. To participate in this advance it is necessary that we devote considerable time to study and discussion; that we be able to give more time to each patient; and above all, if we are to be even moderately successful, that we have a *real* and not a *pseudo* interest in the patient as a human being. This ability to feel for and with the patient, to identify ourselves with the patient as

Read before the Section of Obstetrics and Gynecology at the 76th Annual Session of the California Medical Association, April 30-May 3, 1947, Los Angeles.

it were, comes easily to some and with difficulty to others, but should be developed as one of the physician's most valuable assets.

The majority of neurotic symptoms stem from anxiety. The diarrhea, tachycardia, faintness and pallor experienced before or during stress or danger are typical psychosomatic symptoms the cause of which is quite manifest to the patient. If we accept the well established fact that we may have anxiety due to subconscious conflicts and fears, we have a working hypothesis for the study of our patient. The subconscious has varying degrees of depth—strata, as it were. The deeper the layer in which a conflict is buried, the more difficult its unearthing. The psychotherapist who cannot give full time to this aspect must be content to dig in the upper layers only. When the trouble is accessible, we can help; when it is too deeply buried, only prolonged analysis can benefit the patient. But the superficial, pre-conscious, accessible layers yield helpful material so often that it is very much worth our while to make an attempt at unearthing it. This short technique requires that we know the most common conflicts experienced by our patients, and the possible effects of these conflicts, and that we have the ability to help the patient to reveal her problem, not so much to us as to herself, so that it may be faced and resolved and no longer suppressed.

It is my purpose in this paper to attempt to stimulate further interest in this, to me, fascinating field by discussion of two cases typical of many in which psychotherapy was practical and successful for the non-psychiatrically trained obstetrician, and to call attention to some of the many emotional trauma we as physicians too often impose upon our patients.

Example 1. Mrs. A. lives in a small apartment because no other housing can be obtained. She has had two children in rapid succession, the younger being six months old. She is again pregnant. With no history of nausea in previous pregnancies she now has exaggerated vomiting. She and her husband feel that she must have an abortion but at the abortionist's office their feelings change and they leave without completing their mission. Mrs. A. assures me that she is now completely reconciled to her pregnancy but she continues to vomit and there is no response to treatment. When asked if she is really reconciled to her pregnancy or putting on an act, she finally admits that it is an act and that she still feels bitterly the injustice of being asked to go through another pregnancy so soon and under such adverse housing conditions.

Question: "But why are your housing conditions so important? And does anyone live with you?"

Answer: "My mother lives with us."

Q.: "What is your relationship to your mother?"

A.: "Oh, very good."

Q.: "What does she say about your pregnancy?"

A.: "She says she did it so why shouldn't I."

Q.: "Now, Mrs. A., we are good friends and this is one place where you can really say what you think and how you feel. Suppose you stop pretending to like a pregnancy which causes you so much distress, and also, perhaps for the first time in your life, say what you really feel about your mother."

After long hesitation she burst forth in resentment against her pregnancy but more especially in a flood of pent-up hostility against her mother. When assured that many girls hate their mothers and that she need feel no guilt about expressing her hostility, she drew a picture of a selfish and egocentric mother like the typical "Mom" of Wylie and Strecker. I explained to her that her nausea resulted from her attempt to suppress her hostilities and that from now on she should blow her top in my office as often as she felt like it. She did not vomit again after this visit.

The important points in this case are the suppression or attempt at suppression of the patient's feelings about her pregnancy and, even more important, the suppression of extreme hostility toward her mother, hatred of a parent being to her a terrible sin which she could not admit to in consciousness. Many people hate a parent but few dare recognize their hatred. Does not the Bible say, "Honor thy father and thy mother that thy days may be long"? It goes even further: "Love thine enemies."

EXAMPLE 2

Example 2. Mrs. B., whose husband has been in the South Pacific for two years complained of vaginal discharge, itching and burning, irregular bleeding, pelvic distress, headache, insomnia and loss of appetite. Her past history was negative, pelvis normal with moderate mucus discharge. The patient revealed a strong sexual drive, erotic dreams, sexual excitement when in the company of men who attracted her. She had foregone all social life in mixed company "for fear she might be tempted to be unfaithful to her husband." Under direct questioning she admitted with embarrassment and reluctance that she masturbated. When assured that her sexual drive and impulse toward its satisfaction were normal, in fact more normal than their absence would be, and that masturbation is resorted to by many normal adults when deprived of their usual sexual life, that it does not constitute a perversion in those circumstances and would not result in injury to her mentally or physically if she ceased feeling guilty about it, she appeared visibly relieved and left the office with a new approach toward the months to come before the return of her husband. A month later she was completely well without other treatment than the first and second interview.

The guilt feelings and resulting anxiety in this woman obviously made her ill. The important point in this case to me is the misconception on the part of the patient of what constitutes a normal instinctual drive and what constitutes a perversion. It is not within the province of this essay to discuss this subject. The point that I wish to make is that we as obstetricians and gynecologists come, I believe, closer to the hearts of our patients than almost any other group of physicians. We have not only the opportunity but we have the obligation to study our

patients' emotional as well as their physical problems. This obligation requires us to train ourselves in psychotherapeutic techniques, to take the time with our patients necessary for the application of these techniques, and, above all, to learn to know ourselves, for only he who has insight into his own emotional life can hope to help in the emotional lives of others.

It is astonishing, as we dig around in the superficial strata of the patient's emotional life, how many anxieties we find for which we as physicians must assume the responsibility. Granted that human beings should ideally be well adjusted and capable of meeting reality and coping with it successfully, the fact is we seldom see such a person. No matter how beautiful the facade of equilibrium may be which a patient presents to the world, her inner life may be subjected to turmoil by relatively mild stimuli. The prevention of this instability lies no doubt in parent education, so that the adverse conditioning of infancy and childhood may be avoided and neurotic trends corrected at their source. But we must face the fact that our attitudes and actions exert tremendous influences upon our patients. Justifiably or not we are God-like or, one and the same thing, parent-like in our position of authority. Thus, in analyzing the anxious obstetrical patient we find that in a surprising number of instances she has been told in late adolescence or early adult life, by her physician, that her uterus is retroverted or that it is infantile in development. Going further he has told her that she may never become pregnant; that if she does, she will in all probability abort; and that if she should by chance carry a pregnancy to term, she will require a cesarean section. As a result of the anxiety engendered by such statements we see childless women torn between the desire to satisfy their strong maternal instinct and their fears concerning the hazards of childbearing; or we see a woman who has accidentally or courageously become pregnant, miserable throughout her prenatal period, questioning every subjective and objective symptom, nauseated, sleepless and irritable. The Rh factor should be mentioned as the latest bogey man tossed at the Rh negative patient without the necessary reassurances and explanations that can be given her to offset the grim picture drawn by the lay magazines.

What do our statements to the patient connote to her as a result of her cultural and environmental conditioning, or to chance-acquired information? This question must always be in our minds. The diagnosis of a breech presentation may mean nothing to her or may mean possible disaster. She may have known someone who lost a baby by breech delivery. She may have known of death following cesarean section and as a result her postoperative course, if she has a section, may be stormy due wholly to fear. We may have difficulty hearing the fetal heart, but fail to reassure the patient, with resulting anxiety and illness if, for a time, the fetal movements are imperceptible or weak. In our desire always to have an answer for the patient we may blame miscarriage on over-activity, lifting or intercourse. Granted we may be right, let us consider the woman who has tried for years to become pregnant, finally does so with resulting happiness and great anticipation. She miscarries after intercourse. That solves our problem of explaining the cause, but the resulting guilt feelings of the patient may produce a secondary frigidity, and why not? How can she again satisfy her instinctual needs while associating the act with her miscarriage.

It would be futile to attempt to cite more than a few of innumerable possibilities of trauma to the patient's emotional life resulting from our lack of alertness and sympathetic understanding.

We get tired of other peoples' maladjustments, their inability to understand what seems to us so obvious, in fact their seemingly perverse insistence on misunderstanding and misinterpreting our explanations. Coping with the other fellow's problems depletes our own emotional and physical reserves, and at times it seems too much to ask of us. But the rewards are great and satisfying for the patient and her physician.

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The Choreiform Syndrome; Its Significance in Children's Behavior Problems

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MODERN American child guidance philosophy has been characterized by emphasis on the importance of environmental influence as conveyed through relationships to persons in the environment —parents, siblings, teachers, and others. Emotional attitudes of both the child and his adults and the interplay between them resulting therefrom are rightly considered as important causative factors in any problem situation. Training, experience, habits, and attitudes to parents come in for their share of significance and correctly so. Many of these things are not new, of course, to the experienced pediatrician and family doctor. He has for many years straightened out problems through common-sense and intuitive understanding of the factors involved without the use of any nomenclature or formalized procedure. But even so, there are a great many problems in which the "child guider" can and does contribute something through his knowledge of the hidden, the unconscious, the not readily discernible mental mechanisms. Many successful readjustments in children have been brought about by both pediatrician and psychiatrist, singly or in cooperation. The more comprehensive approach of the Child Guidance Clinic "team" no doubt added greatly to this number of successful readjustments.

From time immemorial all transgressions of both children and adults have been met by punishment. Unacceptable behavior in children was to be punished out of them: fear of future punishment was to act as a deterrent. The same was and is still true for adult criminal behavior and was true in the case of mental illness in a not so distant past. It is for only little over a century that insanity has been regarded as illness. And it is considerably less than a century that anyone has opined that delinquent and criminal behavior might possibly be expressions of disordered functioning of the individual.

With the rapid growth of scientific medicine and physiological insight in the last 50 years or so, delinquents and criminals have been studied from the standpoint of illness both physical and mental. But it soon became apparent that the ordinary nosological categories of disease did not fit. Many delinquents were not sick, not feebleminded, not insane. True, one always "had an alibi" in "constitutional psychopathic inferiority" or in "psychopathic personality" or in "criminal character." But these are only some additional descriptive terms, not etiological concepts.

A deeper understanding of disturbances of behavior came with the psychoanalytic school of thought and, in the case of children and their delinquencies, with the work of such men as Healy and Aichhorn. Our discussion in this essay of physiological factors in no way contradicts the mental and psychobiological mechanisms, described by these men, mechanisms which have been and always will be fundamental, valid and truly etiological. However, we wish to call attention to some physiological facts that have been largely overlooked in the past but are becoming more and more discernible on closer analysis and in the light of more recent knowledge of brain functioning, and to indicate how they directly influence behavior.

The best and clearest example of how actual physical disease of the brain can lead to behavior changes in the direction of delinquency is found in the case of epidemic encephalitis and its sequellae. These changes have been described by many writers since the early 1920's or soon after the great epidemic of encephalitis. The most notable work in this country with such behavior problems has been the Philadelphia project as conceived and reported by Bond, Partridge and Appel.[1,2] Their experiences and descriptions coincide with practically all other reports both here and abroad. At the core of the behavior disturbance is a hyperactivity, a restlessness, and outwardly directed aggression of such intensity as to be uncontrollable by the individual who sometimes merely stands by, as it were, and sees himself act as described. These children often intelligently describe an impulsion or compulsion over which they have no control: "Gee, doc, I don't know how I done it and I'm sorry afterwards!" Eugen Kahn[3] calls this condition an "organic driveness" — a very apt characterization.

Other associated symptoms are often found in these cases, such as sleep reversals and metabolic changes. These help in the localization of the organic disease, but the essence of the abnormal behavior lies in *hyperkinesis* and *aggression*. It has also been pointed out that the balance between instinctual drives and repressive forces has been tipped toward the former, making possible a freer display of aggression. It may well be (and here we are bringing in psychosomatic or somatopsychic essences) that the curbing of instinct through training is possible only in the presence of organic integrity of definite neurone patterns, an integrity susceptible to disturbance or destruction by inflammation or trauma. So it would seem from study of the cases on which this discussion is based.

ORGANIC DAMAGE

Since 1930 more than 3,000 school behavior problems have passed through the author's hands. Seven hundred of these have been the problems of adoles-

Chairman's address, read before the Section on Neuropsychiatry at the 76th Annual Session of the California Medical Association, April 30-May 3, 1947, Los Angeles.

cent delinquents or pre-delinquents. Well over half the cases in the entire series, when thoroughly investigated, have shown evidences of an organic core of disease. From the standpoint of the classroom teacher of the lower grades, the greatest problem is the hyperactive child*; in the series of the adolescents, the graver problems and the repeaters show evidences of organic damage in 75 per cent. Extremely few of these children (0.1 per cent) have had epidemic encephalitis. *but the similarity of the syndrome to that of postencephalitic behavior is striking and the difference is only in degree.* Our attention was first drawn to this similarity by the manifest nervous instability as seen in hyperkinetic motor phenomena, such as choreiform restlessness and jerkiness, which usually accompanied the hyperactive behavior. We have come to label this instability, for purposes of brevity and uniformity, the Choreiform Syndrome. Analysis of the history always reveals some traumatization of the central nervous system, either by inflammation or injury.

* These are, *verbatim*, the teachers' comments with which children are referred for study. They were chosen from one month's referrals.

"Very talkative. Cries out at night. Restless sleep. Enuresis. Concentration poor. Short span of attention. Does not work well in school. Never finishes work unless forced to do it. Does not play with other children if he can get out of it. Frequently gets into trouble on the yard. Loses temper."

"Showing off—noisy—disobedient and rude. Concentration lasts about two minutes. Stamps feet when entering room and shouts. When reading a lesson he may sing or whistle or jump around and dance. On the playground he runs aimlessly and will not play with the other boys."

"Extreme nervousness. Does not get along well with other children. Very nervous. Unable to sit still any length of time. Period of concentration very short. Easily overstimulated when with other children. He tries to cooperate but seems unable to control himself."

"Emotionally unstable—hyperactive—fatigues quickly—short attention span. Talks out loud in the room and in the rest class tosses about on the cot and is noisy. (One doctor said, 'All he needs is more activity.')"

"Extremely hyperactive boy—fatigues easily—school history since B1 is hyperactivity. Short interest and attention span. Mother recognizes this and wishes help. He is becoming a neighborhood problem too in that he isn't dependable—has gotten into vacated buildings. Very immature socially and emotionally—can't sit still very long. Mumbles and hums to self all day long. Slides off chair onto floor—crawls around under tables, etc. Accomplishes nothing—likeable boy as one gets to understand him. Not malicious nor smarty—just queer mannerisms."

"Inability to pay attention in classroom. Wiggles all the time. Jerks spasmodically. Always touching and disturbing other children. Does not get along with them."

"A serious behavior problem. Does not respond to any corrective measures. Mother suggests spanking. We doubt if it will be the right approach. His teacher has tried innumerable ways to have Robert become member of group but does not feel he has made any improvement. Insists on playing during rest period. Rolls around on cot, sticks feet up in air. In the room throws beads, whistles, hits other children unprovoked, calls them names. Plays and will not work. Makes queer noises. Laughs and thinks it is funny when he has conference with teacher. This behavior is of hourly occurrence each day."

"Hyperactive, nervous, short attention span. Greatly lacking in self confidence. Smarty. Wiggles on chair—talks, moves around without apparent aim or motive. Throws things and fights. Hits others without provocation. Must be made to complete work."

"She is extremely nervous and not able to concentrate on anything. Also she is not able to play with other children. Socially maladjusted. She is extremely flighty and her attention span is very short. She is a social problem on the yard for she is very resentful and cannot play with other children. She is also apt to push and hit."

"Excess nervousness. Talking and running around. Unwillingness to do any assigned work. Inattentive in class. Boy is very immature and often seems tired. Does not like organized play."

The crowning one came in recently: "Perpetual motion, both purposeless and mischievous."

SEQUENCE OF EVENTS IN BEHAVIOR PROBLEMS

The following sequence of events appears with such regularity that it cannot be ignored and may indeed be considered a typical case:

1. Of what we consider etiological significance we find forceps birth, very precipitate or prolonged difficult labor; malnutrition or severe febrile disease during the first year; "fall on the head" during infancy or childhood; high fever and/or delirium associated with any of the acute exanthemata; undiagnosed or unexplained fevers of varying duration; middle ear infection with or without mastoiditis.

2. Change in personality and behavior in the direction of "nervousness" and hyperactivity (a) soon thereafter or (b) with the onset of puberty (Healy[4] has noticed and commented upon this last point). This change may also first become manifest when the child enters school; the stimulation and distraction of the group apparently bring out a latent behavior disturbance; complaints begin to pour in: restlessness, lack of concentration (won't or can't?), aggressive behavior towards other children, etc.

3. Progressive failure and maladjustment to school. With an average or better than average I.Q. as measured by Binet, these children show two or more years' retardation in school achievement. Many of them have a relative reading disability and earn better grades in arithmetic and manual activities. Continued pressure by parents and teachers to achieve and succeed merely intensifies the conflict and resulting maladjustment. Continued failure plus a physical restlessness and distractibility make school a place of torture. Or hopeless competition with a superior sibling brings about the same result.

4. At this point the behavior course may diverge in the direction of delinquency. Truancy enters the picture and brings with it rebellion and conflict. Truancy brings active "retaliation" from the powers that be: truant officers, disappointed parents, probation officers. If the boy has any sort of "spunk" he fights back and a delinquent is in the making. An unbelievable amount of delinquency originates in truancy and the problems centered about it.

5. Results: If correction is not achieved at this point, behavior becomes more and more antisocial.

Compensatory behavior ensues and leads to adventure in such things as car-stealing and gang-depredations. In less gregarious youngsters, more devious and secretive ways of obtaining satisfaction are seen: lone-wolf stealing, burglarizing, vandalism. Also at this point may the form of deliquent behavior be determined neurotically; certain symbolic and disguised sexual and aggressive behavior may come to the fore. Many of the contributions of the psychoanalytic school of thought are based on this particular segment of delinquent behavior. But it is a small segment, valid though the mechanisms described are, and does not begin to encompass statistically the great numbers of delinquents with whom we have to deal daily. The child may be carried through the above sequence in the manner described: when the delinquent level is reached, behavior takes on the form prescribed by his unconscious conflicts, usually the death-wish directed either outward or inward or both. The damaged and mal-conditioned mechanism makes possible the release of antisocial instinctual drives at a time when the individual is already in open conflict with his environment on the conscious level for consciously perceived reasons.

As a rule, these children have a normal or better I.Q., and they look healthy. The ordinary physical and even neurological examination produces nothing of importance. So, not being *dumb* and not being *sick*, these children are *bad* and this appraisal follows them through the years, gathering momentum. A certain number of cases (smaller than we used to think) are explainable by more purely psychological or dynamical concepts—fixations, indulgence, neglect, faulty habit training, etc. But, as already has been stated, even these mechanisms may need an "organic" release, or at least operate along with the physiological factors. Too often do we see the physiologically damaged one of a group of siblings turn out to be the black sheep: he has been exposed to very similar experiences but has been unable to make a similar adjustment because of a damaged "machinery of adjustment." It is only when one is alive to the more subtle neurological changes—hyperkinesis, choreiform restlessness, fine tremor, too lively reflexes, ortho- and parasympathetic signs, metabolic disorders of varying degree—and along with these can consider and correlate the type of behavior—hyperactivity, distractibility, aggressive attack—that one begins to see the postencephalitic or posttraumatic core of the symptom complex. Now, as stated before, it is not claimed that all these children have had encephalitis and have developed clinical postencephalitic changes as a result. But what appears to be true is that the ordinary acute exanthemata of childhood are too often complicated by encephalitic invasion of the central nervous system (high fever and delirium are the indicators in our experience) and thus influence later behavior in a manner similar to epidemic encephalitis. The difference is only in degree; the cardinal signs of *hyperkinesis* and *diminished inhibitions* are the same. Here we must include other infections, especially of the middle ear and mastoid, as well as the various head traumata. Posttraumatic and postencephalitic behavior are in general the same.

PLACE OF SCHOOL IN DELINQUENCY PATTERN

The behavior course toward delinquency, as previously traced, leads through school difficulty and conflict. This must not be construed as meaning that all delinquency arises from school difficulties. The fact that the first steer in the direction of delinquency so frequently occurs in relation to school experiences is due to the following: (1) school is a universal childhood experience; (2) school is the first testing-ground of the child's adaptive capacities to society-at-large (as contrasted to the smaller family circle) under conditions of (a) imposed prohibitions or control and (b) competition with peers. These two demands, (a) and (b), are real tests of the social-adaptive mechanism and soon bring to light any flaws in it, whether built-in by faulty training in the family *milieu* or caused by organic damage to the machinery of adaptation—the central nervous system. In the organically undamaged child, mal-conditioned behavior can more easily be reconditioned by proper training, by normal growth and maturation, and by the inherent self-preservative drive when it can function without organic handicap. But when the actual "machinery" of adaptation to social restrictions and demands has been damaged by inflammation or trauma, reconditioning and training are not so easy and frequently fail. Then is when rebellions against control, satisfactions to compensate feelings of inferiority, escapes from intolerable situations, etc., lead to "delinquent" behavior. It is this failure of adaptation to social requirements that breeds delinquency and may foreshadow later criminal behavior.

Flaws in the adaptive mechanism. One can be more specific in defining these flaws, in the light of observation of school children through the years of their school career. Many children in the primary grades, who show (1) hyperactivity and uncontrollability, (2) distractibility and short attention span, (3) reading disability or low achievement scores in spite of a high I.Q. (probably due to (2)), (4) hyperexcitability chiefly when in a group of children, and (5) aggressive actions against other children, later turn up in the "welfare center" of the city schools as pre-delinquents or delinquents. Complaints by teachers begin to come in even when a child is in kindergarten: noisiness, running, pinching, shoving, disrupting games. Later there is difficulty in learning to read: arithmetic scores may be better but both reading and arithmetic achievement may be low, in the face of a relatively high I.Q. as measured by Binet. If the child can work alone with a tutor without the exciting distraction of the group, there may be some improvement in these, or there may not. Even under the kindly individual attention of a tutor, the mind wanders; a word learned today is gone tomorrow. On through the school years difficulties pile up, tension increases, rebellion grows. A younger brother or sister may be a grade or two ahead. Parental disapproval and rejection are felt

even though verbally not expressed. The result is our full-blown delinquent or pre-delinquent.

As to flaws in the adaptive mechanism: What are the specific functions of the human mechanism, directly involved, disturbance of which leads to the kind of trouble described above and finally to delinquency via the path of school maladjustment? These are: (1) Disorders of concentration and attention; (2) Disorders of emotional control. The importance of power of concentration and of emotional control in the learning process and in group life (school to the youngster) is self-evident. Attention and concentration are fundamental to learning; control of the emotions, especially the rage-response, are essential to getting along in the group. Most school difficulties can be boiled down to disturbance in one or both of these areas.

DAMAGED MACHINERY OF ADAPTATION

No one can deny that training is of prime importance in the development of concentration and self-control. Successful training, however, depends not only upon proper training experiences, but also upon a reasonable integrity of the nervous mechanisms involved in the habit-formation we call training. It is exactly the integrity of these nervous mechanisms that is damaged in the cases upon which this paper is based. Concentrated attention and emotional control require intact cell patterns and connections. It is common experience to find these powers decreased or destroyed after a severe febrile illness or injury. The conclusion is forced upon one that the nervous connections necessary to these functions have been damaged.

The location and extent of these nervous connections and cell-patterns are not completely known. All levels of cerebral activity are probably involved. But we have reason to believe that the core of the trouble lies in the diencephalon. Emotion and emotional control are referred to the hypothalamus by numerous writers and researchers: we have only to recall the violent and sham rages of experimental hypothalamic stimulation or of invading tumors of the third ventricle in order to see the relationship. Short attention span and distractibility, however, are more difficult to connect up with the hypothalamus. These, I think, are mere differences in degree and modality of the function of awareness which in turn is related to the function of consciousness-maintenance. Ingham and others support the localization of consciousness in the hypothalamus. The extreme somnolence or extreme wakefulness in cases of encephalitis are certainly suggestive of such a localization. Probably the acme of activity of this consciousness-maintenance mechanism is seen in the function of highly concentrated attention and the ability to hold it so, shutting out distracting stimuli. Certainly, failure of this function leads to a reverse condition of scattered attention at the mercy of any stimulus or to a dropping off into sluggish somnolence.

As to control of the emotions, it is basically human to become angry when things do not go our way. In fact, the behaviorist Watson declares that the rage-to-thwarting response is one of the three unlearned emotional mechanisms with which a child comes into this world. Normally, growth and training bring this primary emotion under the control necessary to living in a group. One cannot go around "flying off the handle" whenever thwarted, and last long in society. Yet there is no doubt that the successful curbing of this primitive instinct requires the integrity of certain neural mechanisms, an essential link in the chain being located in the hypothalamus. For when the hypothalamus is electrically stimulated in cats, all the physical manifestations accompanying rage ensue —so-called sham rage; when a third ventricle tumor invades the thalamus and hypothalamus, marked automatic unprovoked rage explosions may occur. Rage attacks following insignificant stimuli have also been reported in postencephalitic cases.

While a certain degree of anger and rage is normal, it is excessive irritability or rage out of all proportion in its appropriateness or violence that concerns us here. We see children fly into rages of such extreme that the child is completely inaccessible and uncontrollable, and the attack has to "wear itself out," so to speak, much like an epileptic attack. Indeed, we feel that there is a relationship to epilepsy in such uncontrollable rages; many of these children show abnormal activity in their electroencephalograms. Thus, in a series of 79 problem cases whose outstanding symptom was temper or rage tantrums with or without adequate stimulus, six showed normal tracings, seven showed what was termed borderline dysrhythmia, and the remainder gave more pronounced findings, such as general dysrhythmia, psychomotor waves, a few slow bursts, fast wave bursts, severe dysrhythmia, and some localizing occipital, central and frontal disturbances, mostly dysrhythmia. We were unable to correlate these findings very exactly with the behavior syndrome. They are of course not conclusive, merely suggestive. And it must be noted that dysrhythmia occurs in a large proportion of the population without any clinical cerebral signs.

So here we have two basic functions essential to the process of adaptation: power of concentration and emotional control. These functions or their anatomical substratum are vulnerable to trauma and infection. Damage to them causes a real handicap to the child, far greater in the long run than many more visible and tangible handicaps. In our experience with many school behavior problems, from the kindergarten mischief-maker to the adolescent delinquent, these functions were damaged early in life in most cases and such damage contributed directly to the behavior problem.

Distractibility and lack of emotional control seem to run through many of the maladjustments of childhood and so influence all later life. Not only do they directly handicap the individual possessing them in actual performance and competition, but they also evoke unfavorable responses from those about him and thus aggravate both his condition and his maladjustment. Such children are constantly thwarted by their own poor performance and hounded by the

reactions of impatient and intolerant parents and teachers. As a result they turn to other compensations, usually undesirable behavior and mischief (here their hyperactivity drives them), or they may withdraw into themselves. Their intelligence need not be diminished, but their inability to apply themselves precludes their gaining sufficient useful knowledge or skills. Continued lack of success embitters them. Their emotional irritability and excitability can create even more misery for them, depending upon the responses aroused in others. Frequently they are beaten, deprived, ostracised for traits and behavior beyond their own power to mend. With everyone "mad at them," there is rarely anyone to lend a helping hand—so little is understood about the real nature of their difficulty. Continual rebuffs and hostility to an organically irritable, uncontrolled and destructive child—thus can delinquents be created.

WHAT CAN BE DONE ABOUT IT?

What can be done about it? Comparatively little in the older and more hardened individuals. The incidence of recidivism is high, as shown in the follow-up studies by the Gluecks on delinquents. Even Bond's group of postencephalitics, who had had ideal treatment in a hospital school, showed many breakdowns after returning to a more unsupervised and tension-producing home situation. I see many boys whom I studied in a child guidance clinic years ago and in whom I missed the significance of the above-described changes, turn up in one of my present clinics as full-blown delinquents. Critical study at the present time reproduces the picture described above.

But we can do something in a preventive way. This lies in the early recognition of these adaptive handicaps and disabilities. Such recognition must be followed, not by attempts to coerce or change the child, but by adjusting the requirements placed upon him to his capacity of performance. When it is understood by all concerned why he behaves as he does and how much improvement he is capable of, then a start in his treatment has been made. When the impossible is no longer expected of him, the tension lessens all around. Then and not until then can he begin to improve. At that point whatever physiological treatment is indicated has a chance of taking hold. Some of these hyperactive states and epileptoid rages do respond to medical treatment. Frequently the treatment of coexisting endocrine and metabolic disorders (and the hypothalamic area is a particularly fertile field for such) will modify the nervous basis of the undesirable behavior traits. Our experience with such medical treatment has been described elsewhere.[5] Once the child need no longer struggle against hostile odds on all sides, normal growth and development will also contribute their share in the "outgrowing" of the disordered neurone-hookups which underlie the disordered behavior; this we have seen time and again.

SUMMARY

In this presentation the author has tried to point out certain organic factors that enter into the formation of a majority of school behavior problems. These factors are not readily apparent but can be discovered by careful neuroendocrine examination correlated with an understanding of the behavior sequence. They are factors that are operative in spite of normal intelligence, good general health and even favorable home environment. They are in the main disturbances of concentration and attention, with a deficiency of emotional control particularly the rage-reaction. Hostile and aggressive behavior is facilitated by these defects even though its form and content are determined by unconscious factors based upon parent-child relationships. Not being well understood, these children are subjected to the same pressure and requirements as their normal siblings and mates. The resultant rebellious or withdrawn behavior is misinterpreted or futilely treated, trouble begins to pile up and delinquency is in the offing. When they are properly understood, however, the impossible is no longer expected of them. Very often medical treatment of the apparent neurophysiological disturbances, along with proper adjustments of psychological relationships in the environmental patterns, brings about an increasing improvement, aided and abetted by normal physiological growth. Then the beginning of a favorable readjustment is at hand.

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REFERENCES

1. Bond, E. D., and Partridge, G. E.: Postencephalitic behavior disorders in boys and their management in a hospital, Am. J. Psychiat., 6:25-103 (July), 1926.

2. Bond, E. D., and Appel, K. E.: The treatment of behavior disorders following encephalitis, New York, 1931, Commonwealth Fund Publication.

3. Kahn, Eugen, and Cohen, Louis H.: Organic drivenness, a brain-stem syndrome and an experience, New England J. Med., Vol. 210, No. 14, 748-756 (April 5), 1934.

4. Healy, William: Prognosis of lethargic encephalitis in childhood, Arch. Neurol. and Psychiat., 36:921-930 (Nov.), 1936.

5. Timme, Arthur R.: Relation of childhood infections to behavior, Calif. and West. Med., Vol. 49, No. 6 (Dec.), 1938.

The Clinical Significance of Chronic Parametritis

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IT long has been recognized that the parametrium plays an important role in serious and extensive diseases of the uterus such as inflammations, carcinoma and endometriosis. The purpose of this report, however, is not to draw further attention to this complication but to a related and seldom recognized condition which is characterized by a demonstrable thickening of the sacro-uterine ligaments and an associated train of symptoms. It is not described in our standard textbooks of gynecology, with the exception of Emge's chapter on Inflammations of the Cervix Uteri in Davis' Obstetrics and Gynecology,[3] and his reference is mostly concerned with the complications of acute cervicitis.

MATERIAL

This study is based on 54 patients observed in private practice. The actual incidence of the condition is difficult to determine since many cases were observed in consultation only, but a rough estimate would indicate that it occurs in about 6 per cent of all patients seen by the gynecologist. This figure certainly directs particular attention to the importance of the syndrome.

The age distribution is given in Table 1 and it may be noted that it is a disease predominantly found during the active sexual life of women, with the maximal frequency between 25 and 35 years of age. It occurred much more frequently in multigravidae than in women who have had no pregnancies. Of the 54 cases, 16 had had one pregnancy, 15 had had two, 11 had had three or more, while only 12 were nulligravidae.

SYMPTOMATOLOGY

As shown in Table 2 chronic parametritis* may be responsible for many complaints, but the most constant one was pain in the lower abdomen and it was presented by 40 of the 54 patients. In 18 instances it was referred to both lower quadrants, while one or the other side was affected in each of 11 cases. The pain was described mostly as of a dull aching character but also as cramp-like, and frequently as "a sort of burning sensation." It was rarely localized to a definite area; in fact, the patient was often vague in attempting to point to "the spot that hurts."

Table 1.—*Age Distribution*

Years	No. of Cases
15 to 19	1
20 to 24	9
25 to 29	13
30 to 34	15
35 to 39	9
40 to 44	5
45 to 49	2
Total	54

Table 2.—*Symptoms*

	Cases
Pain lower abdomen	18
Vaginal discharge	12
Pain R.L.Q.*	11
Pain L.L.Q.†	11
Dyspareunia	11
Metrorrhagia	9
Backache	8
Dysmenorrhea	6
Pain defecation	5
Pain down leg(s)	4
Nausea	2
Unilateral backache	2
Frequency urination	2
Diarrhea	1

* Right lower quadrant of the abdomen.
† Left lower quadrant of the abdomen.

Although often worse during menstruation, the pain at times was relieved by the onset of a period. Of special importance from a diagnostic standpoint because they can be explained on the basis of the anatomic lesion are pains during sexual intercourse and during defecation. Recently, two women reported the occurrence of sharp pain while inserting or removing a contraceptive diaphragm. The irregular bleeding noted in nine instances consisted merely of "spotting" and was considered as a complication of cervicitis with erosion and not as bleeding from the fundus uteri.

The lesion is essentially chronic in nature. As described in this report it is not a disease for which patients are sent to a hospital or which demands instant medical attention. The patients do not have nausea, vomiting, fever, leukocytosis or other indication of an acute abdominal or pelvic lesion demanding emergency surgical care. Only nine patients of this series had had symptoms for less than one month, and while one of the remaining 45 had had them for less than two months, 44 traced their difficulties for periods of from more than three months

Presented before the San Francisco County Medical Society, October 9, 1945, and the San Francisco Gynecological Society, November 9, 1945.

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* Oria and Fraenkel,[5] although studying this problem from a different angle, call the lesion "parametritis posterior."

to several years. In one woman abdominal pain had occurred off and on for 15 years.

DIAGNOSIS

The diagnosis is established by the demonstration of a thickening and marked tenderness of one or both sacro-uterine ligaments. These structures differ from our usual concept of a ligament as they are not permanent cords and more correctly should be termed the "plicae recto-uterinae" or "the recto-uterine folds of Douglas." They consist of two crescentic thickened folds of peritoneum which arise from the uterus at about the level of the internal os, sweep laterally on each side of the rectum and become reflected on the posterior pelvic wall at about the level of the second and third sacral vertebrae. Between these two folds are found muscle fibers and a diffuse fibro-elastic meshwork, so that they have been considered important factors in supporting the uterus (Blaisdell,[1] Tandler,[7] Oria and Fraenkel[5]) and various surgical procedures have been advanced to utilize them in performing a suspension operation (Bovee,[2] Goffe,[4] Somers and Blaisdell[6]). In addition, many blood vessels and lymph channels are also found which lead to the left latero-sacral and hypogastric groups of glands.

In normal individuals the sacro-uterine ligaments are difficult to palpate but in the presence of a chronic inflammatory lesion it is relatively simple, and two methods are available. One, advocated by Somers and Blaisdell,[6] consists of drawing the cervix down with tenaculum forceps so that the ligaments may be felt with the examining fingers in the vagina. An even simpler procedure consists of a recto-vaginal examination. In this case the index finger in the vagina applies pressure to the posterior surface of the cervix in order to bring it forward and upward. This puts the sacro-uterine ligaments under tension so that they may readily be palpated by sweeping the middle finger in the rectum from side to side. The tenderness elicited by this procedure is usually very marked, and in some cases of accentuated parametritis the folds are thickened to the point that they give the impression of being bands of even as much as 1 cm. in diameter. In this series both ligaments were involved in all cases, but involvement was more pronounced on the right side in five instances and on the left in seven.

Tenderness is not usually elicited on moving the uterus from side to side, as contrasted with the response when this diagnostic manipulation is done in women with pelvic inflammatory disease. However, in four cases tenderness was found when the uterus was elevated by pressure from below upward.

In the differential diagnosis a prime consideration is endometriosis of the recto-vaginal septum and the sacro-uterine ligaments. This disease and parametritis may be confused, but in endometriosis the pain is greatly intensified at the time of menstruation, and on palpation the lesion tends to have a nodular character. It likewise fails to respond to the heat treatment advocated in this report.

This type of chronic parametritis is primarily a direct result of inflammatory lesions of the cervix uteri which was demonstrable in 34 of the 54 patients of this series (Table 3). In the other 20, however, it was not possible to find any existing cervicitis either on examination or by scanning the clinical history. The occurrence of retroversion-flexion of the uterus in 16 of the 54 suggests that it may be a factor, but doubt must be entertained on this point since this position of the uterus is present in about 25 per cent of all apparently normal individuals.

Table 3.—*Associated Lesions*

Cervicitis with erosion	24
Retroversion-flexion uterus	16
Chronic cervicitis	10
Cystitis	2
Cryptitis	1

TREATMENT AND RESULTS OF TREATMENT

The treatment consists essentially of two procedures. In the first place any inflammatory lesion of the cervix with or without erosion must be eliminated by recognized measures such as cauterization or conization. Secondly, the application of heat. This may be accomplished by diathermy, but a simpler method which can be conducted by the patient herself is to employ hot Sitz baths with continuous douche. The patient is instructed to sit in a bathtub with the water reaching up to her waist and as hot as she can tolerate. While seated, she gives herself a continuous plain hot water douche under low pressure. This should be done for 20 minutes once or twice daily except during the menses.

It has been possible to follow up 33 of the 54 patients in this series. Cauterization of the cervix was done, following a preliminary course of hot baths lasting from two to five weeks, in 13 cases; 19 were treated solely with hot baths, and in one instance no treatment was given.

The results are given in Table 4. It is noted that of the 33 patients 14 were completely free of symptoms and in them no evidence of thickened sacro-uterine ligaments could be made out after varying periods of time; definite improvement occurred in 13 instances; in six cases there was no relief. However, of those cured or improved, six later returned

Table 4.—*Results*

Result	Duration of Treatment	No. of Cases
Cure	1 month	2
	2 months	2
	3 months	3
	over 3 months	7
	Total	14
Improved	1 month	7
	2 months	1
	over 3 months	5
	Total	13
Not improved	1 month	2
	2 months	2
	over 3 months	2
	Total	6
Recurrences		6
No follow-up		21

with recurrence both of symptoms and the physical findings.

SUMMARY

The existence of a chronic parametritis is evidenced by a thickening and tenderness of the sacro-uterine ligaments which are readily demonstrated on recto-vaginal examination. This lesion is usually a sequela of cervicitis and may be associated with numerous symptoms, the most characteristic of which are lower abdominal pain, dyspareunia, backache, dysmenorrhea, and pain on defecation.

The treatment consists of attending to any existing cervical lesions and the use of hot Sitz baths and douches.

The results obtained in a small series of cases are given.

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REFERENCES

1. Blaisdell, F. E.: The anatomy of the sacro-uterine ligaments, Anat. Rec., 12:1, 1917.

2. Bovee, J. W.: The surgical treatment of the utero-sacral ligaments through the vagina in retroversion of the uterus, J.A.M.A., 39:12, 1902.

3. Emge, L. A.: Inflammations of the cervix uteri, Vol. II, Chapter I, Davis' Obstetrics and Gynecology, W. F. Prior Co., 1936.

4. Goffe, J. R.: Intra-abdominal shortening of the round ligaments per vaginam for the cure of retrodisplacements of the uterus, Amer. Gynec. (Oct.), 1902.

5. Oria, J., and L. Fraenkel: Estrutura dos ligamentos sacro-uterinos humanos, Revista de Obstet. e ginecol. de Sao Paulo, 4:137, 1940.

6. Somers, G. B., and F. E. Blaisdell: The anatomy and surgical utility of the sacro-uterine ligaments, J.A.M.A., 81:1247, 1913.

7. Tandler, J.: In Veit-Stoeckel's Handb. der Gynaek., Vol. I, pt. 1, J. F. Bergman, 1930.

MEDICAL PROGRESS:

Acute Appendicitis in Childhood; A Summary of Present Concepts

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INCIDENCE

CHILDREN below the age of 14 years account for almost one-quarter (22.5 per cent) of the overall incidence of acute appendicitis. The disease is relatively rare in infants and young children, increasing rapidly in frequency of occurrence as the child approaches adulthood.[4] Males are affected slightly more often than females.[5,10]

ETIOLOGY

The structure and position of the appendix tend to promote stasis, with frequent formation of concretions, change in pressure-distention relationships, and interference with blood supply. Bacteriologic invasion of the wall of the organ follows.[5,12,14] The infecting organisms vary widely, by far the most frequent being E. coli.[5] Hemolytic and non-hemolytic streptococci are found considerably less often. Oxyuris vermicularis is present in a relatively low percentage of cases. The invading organisms are believed to belong to the normal flora of the colon. There is no direct evidence that a correlation exists between the incidence of acute tonsillitis or other acute upper respiratory infection and acute appendicitis.[5,12] There are certain anatomic factors in children which profoundly modify the course of the disease. The appendiceal wall contains relatively less fibrous tissue and more elastic tissue in children than in adults, causing a tendency toward earlier perforation.[13] The appendix in a child is relatively longer as compared with the size of the peritoneal cavity, the cecum more mobile, and the omentum shorter and thinner, than in the adult, resulting in less efficient localization of the inflammation.[12] The younger the child, the more these factors affect the disease.

DIAGNOSIS

A general rule applicable for diagnosis is that "abdominal pain, vomiting, and slight fever should always be considered as due to acute appendicitis until proved otherwise."[12] Abdominal pain is the most constant symptom, appearing in over 95 per cent of all cases.[5,10,12] In non-perforated acute appendicitis, about two-thirds of the patients localize the pain in the right lower quadrant, the remainder in the peri-umbilical region, or generalized throughout the abdomen. Following perforation, however, less than half exhibit right lower quadrant localization. Over 80 per cent of children with acute appendicitis vomit.[5,10,12] When nausea and anorexia are included in this symptom complex, the percentage so affected rises considerably.[10] Usually the pain precedes the vomiting, but occasionally the reverse is true, especially in children under four years of age. Constipation is present in 13 to 26 per cent of cases, diarrhea in 8.7 to 16 per cent. About 10 per cent or less have urinary complaints.[5,10,12] Less than one-third of these patients have a history of a previous similar attack.

The rectal temperature is usually between 100° F. and 101° F. in cases of non-perforated acute appendicitis and between 101.5° F. and 103.5° F. after perforation occurs. Maximum tenderness is present in the right lower abdominal quadrant in 76 to 98 per cent of patients.[5,10,12] Rectal tenderness can be elicited in 87 per cent of cases.[5] The rectal examination is of great importance, especially considering the frequent tendency of the appendix in children to be directed downward into the pelvis,[11] thus altering the abdominal signs. Abdominal tenderness and muscle spasm may be diminished or even absent in pelvic appendicitis. Spasm of the right rectus muscle is present in 64 per cent of patients having non-perforated acute appendicitis, this figure rising to 94 per cent following perforation.[5,10,12]

A leukocytosis greater than 10,000 is found in over 90 per cent of cases of acute appendicitis, and an increase in the polymorphonuclear cell ratio in over 95 per cent, assuming the normal relative lymphocytosis of childhood is taken into account.[5,10,12] Urinalysis is important mainly for the estimation of the state of hydration by the degree of acetonuria and for the purpose of ruling out urinary infection. Although, occasionally, erythrocytes may be found in the urine secondary to ureteral irritation due to an adjacent acutely inflamed appendix, no such relationship between pyuria and appendicitis can be demonstrated.[5]

The symptoms and signs of acute appendicitis in children are very similar to those seen in adults, provided they can be correctly elicited. The older the child the less difficult this becomes. In the very young, however, irritability, disturbed sleep, and crying spells may continue for hours before vomiting or refusal of food direct the parents' attention to the abdomen. The consequent delay in hospitalization is an important factor in producing a higher incidence of peritonitis, and therefore the relatively higher

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mortality and morbidity in this age group. Once the patient is in the hospital, frequent (hourly or oftener) examinations are necessary until the decision to operate is made or the diagnosis of acute appendicitis discarded. Patience and unhurried gentleness are prerequisites for a successful examination. The abdomen should always be palpated first, before other, more frightening aspects of the procedure are carried out.[12] Special abdominal signs such as rebound or referred tenderness are often difficult to elicit and are, therefore, of less value in children than in adults. In performing the rectal examination the finger should be inserted very slowly to prevent sudden painful dilatation of the anal sphincter. The finger tip should explore the pelvis slowly and gently while an attempt is made to direct the child's attention elsewhere.

When diarrhea is present in acute appendicitis, a pelvic mass, or evidence or peritonitis is usually found.[12] If not, some aid in differential diagnosis may be gained by evaluation of the pain, which is continuous in acute appendicitis and recurrent in acute enteritis. Lower abdominal pain persisting longer than 12 hours should be considered due to appendicitis unless proved otherwise.[7] There is no reliable method to differentiate acute appendicitis from mesenteric adenitis.[1] If the patient has an upper respiratory infection, and a highly febrile onset, mesenteric adenitis may be suspected. If appendicitis cannot be ruled out, however, operation should be performed. Occasionally an appendiceal abscess is palpable (14.2 per cent of cases in one series[10]). Frequently, however, these masses are present but not diagnosed preoperatively.[5]

TREATMENT

The treatment of acute appendicitis in childhood is early appendectomy. To this may be added, "When there is reasonable doubt [as to the diagnosis], operate."[10] This holds true whatever the stage of the disease, since, because of the poor localizing factors of the child's peritoneum, the delayed operation or Ochsner regime produces an increase in overall mortality and in morbidity in terms of prolonged hospitalization.

Preoperatively, a delay sufficient to combat dehydration is advisable, although with the average patient this can be accomplished in the interval during which the laboratory data are being gathered or the operating room prepared. Parenteral sulfonamide and antibiotic therapy may be initiated at this time in the very ill. If general peritonitis is present it is well to institute gastric suction prior to surgery. Open drop ether has proved in most cases a safe and reliable anesthetic.

The McBurney incision is the incision of choice and should be used in uncomplicated acute appendicitis, in perforated appendicitis with general peritonitis, in perforated appendicitis with right lower quadrant abscess and in cases of doubtful diagnosis in which acute appendicitis is most likely. A right rectus muscle splitting or medial muscle retracting incision may be used when a pelvic mass is present within which the appendix is presumed involved, and in cases of doubtful diagnosis wherein the "odds" are against appendicitis. This incision may also prove advantageous in the occasional case in which perforation has occurred into the omentum, with resulting good localization. If the diagnosis can be made preoperatively, by detection of a moveable mass, the operation may be made "clean" by resection of the involved omentum together with the appendix without disturbing the site of perforation.[10] Drainage, when indicated, in cases of right rectus incision, should be established through a "stab" wound in the McBurney area. A lower mortality is associated with the use of the McBurney incision,[4,10] although there is disagreement upon its advantages in children.[5,12]

In freeing a perforated appendix from surrounding structures, gentle dissection with the suction tip is recommended. The blunt instrument adequately separates the adhesions while carrying off the surrounding purulent debris. The stump of the organ should be inverted when this is possible without endangering surrounding organs or unduly prolonging the operation. One to three grams of sulfanilamide crystals are left within the peritoneal cavity if the appendix has perforated, since it is felt that an effective blood level is rapidly attained in this way. Drainage is advocated in most cases of acute perforated appendicitis in children in spite of the recent trend against this procedure in adults similarly afflicted.[9]

The "anti-localizing" factors of the child's anatomy are important in preventing complete resolution of the peritoneal infection as frequently or quickly as this occurs in adults. Two folded rubber dam drains are used. The larger is placed within the posterior cul-de-sac and led outward adjacent to the parietal pelvic peritoneum, and through the wound (if McBurney) or a "stab" wound in the McBurney area. The smaller drain is placed within the inferior right lumbar gutter, emerging adjacent to the first. To preclude small intestinal obstruction or fecal fistula, neither drain should pass between loops of bowel, nor lie against the appendiceal stump.[12] The removal of the drains is as important as correctly placing them, for a pelvic abscess will frequently follow their premature withdrawal. The lumbar drain should be removed in 48 to 72 hours, at which time the pelvic drain is loosened. When the character of the drainage changes from frankly purulent to mucopurulent (fourth to seventh postoperative day as a rule) shortening at the rate of 2 centimeters daily begins. As the drainage becomes small in amount and mucoid in character, the drain is removed (usually upon the ninth to twelfth postoperative day).

It has been recommended on good authority[2,12] that appendiceal abscesses simply be drained, with removal of the appendix only if it is "easily available." This assumes an "interval" appendectomy at some later date. We feel, however, that an effort should be made to remove the organ at the primary operation and that in most cases this can be done.[9,13] To leave the appendix invites recurrence of the infection prior to the secondary operation, and requires

two anesthesias and two laparotomies to accomplish a single result. With modern antibiotic and chemotherapy, the localizing wall of the abscess need no longer be so meticulously avoided by the operator.

The postoperative treatment of these patients is of great importance. In the uncomplicated case of acute non-perforated appendicitis, adequate oral fluid intake usually occurs from the first postoperative day onward, ambulation may be begun at any time after the first postoperative day, with discharge from the hospital in five to seven days. No antibiotic nor chemotherapy is given. When perforation has occured, particularly with general peritonitis, more vigorous measures must be undertaken. Fowler's position is frequently advocated [5,12] but we feel that the resultant pooling of pus within the pelvis promotes adhesions and intestinal obstruction. The dorsal recumbent position with frequent turning from side to side is recommended instead. Hydration is accomplished intravenously by giving 75 to 90 cubic centimeters of 5 per cent dextrose in 0.85 per cent saline, or 5 per cent dextrose in distilled water per pound per day to children under two years of age, 45 to 60 cubic centimeters per pound per day to those over that age. Care is taken to replace only the sodium chloride lost by the normal metabolism plus the loss incurred with the use of gastric suction. The blood chemistries are closely followed and complete intravenous caloric and amino acid replacement attempted only if the period of gastric suction continues longer than three days. Frequently, transfusions are required during the acute postoperative period, or, later, to hasten convalescence. No transfusion should exceed 10 cubic centimeters per pound of body weight. Gastric suction is used for one to five days postoperatively as indicated to combat distention. Frequent use of the rectal tube is also helpful in this respect. External application of heat to the abdomen is not recommended since, following the increase in intra-abdominal temperature, the gases within the bowel tend to expand, and may cause further pain.

Chemotherapy with divided daily dosage of sodium sulfadiazine, 32.4 to 48.6 mg. (½ to ¾ grain) per pound intravenously or subcutaneously is begun 12 hours postoperatively. The interval allows for the absorption of the intraperitoneal sulfanilamide. The dose is increased to 65 mg. (one grain) per pound per day of sulfadiazine when the drug can be taken orally. Antibiotic therapy with penicillin and streptomycin is also employed in the very ill. On the theory that about eight times more penicillin is needed to destroy the staphylococcus or streptococcus in the presence of E. coli than when this invader is absent, large doses of this agent are used.[3] Intramuscular penicillin, 50,000 units every three hours, is given to children under five years of age, the dosage increasing with the age thereafter. Streptomycin is given by intramuscular injections every three hours, the total daily dose being 1 gm. for children under five, increasing with age. This drug is discontinued in from four to eight days, or sooner, depending upon the course of the infection. As streptomycin has become more available, our policy has been to use it more, and penicillin less frequently. The oxygen tent is occasionally of value in the immediate postoperative period. Liberal sedation using barbiturates, codeine, or morphine should be employed during the acute illness.

COMPLICATIONS

The complications of appendicitis most often seen are residual peritoneal abscesses (usually pelvic in location), intestinal obstruction, pneumonia, and wound abscess.[10,12] Since the advent of sulfonamide therapy, both pneumonia and intestinal obstruction have materially decreased in incidence.[10] Wound abscess is preventable by draining the incision to the depth of the peritoneum in all cases wherein there is a question of contamination. When this precaution is taken the complication is rare. Residual pelvic abscesses and intestinal obstruction remain the most frequent complications at the present time, being found in 6.7 per cent and 3.9 per cent of cases respectively.[12] These residual abscesses will almost invariably subside with antibiotic and chemotherapy, although occasionally one will drain spontaneously into the rectum or vagina. Intestinal obstruction usually occurs between the fifth and fourteenth postoperative days. About half the cases respond to gastric or small intestinal suction-decompression and chemotherapy. The remainder require secondary laparotomy and lysis of adhesions. The Miller-Abbott tube is of little value in patients under five years of age due to difficulty in passing the tip through the pylorus.

PROGNOSIS

The mortality in acute appendicitis varies mainly with the age of the patient, the stage of the infection when treatment is started, the presence of other disease, and the type of therapy. The fatality rate from this condition in the United States is 4.5 to 5 per cent, including all age groups.[6] The age variation is illustrated by a crude mortality figure of 17.22 per cent for patients under five years of age, 6.2 per cent in the five to nine year group, and 2.74 per cent in those between nine and fourteen years old.[4] The effect of the stage the disease has reached when operation is performed is shown by a mortality of 0.96 per cent in non-perforated appendicitis as compared with that of 10.76 per cent following perforation.[10] There are two essential factors in children which affect the stage of the disease at operation, and thus the fatality rate. One of these is the anatomic difference in intraperitoneal relationships between the young child and the adult. The second is the delay in operation due chiefly to difficulty in diagnosis. The younger the child, the more heavily do both factors weigh against him. In one series, 80 per cent of children under four years of age had peritonitis at operation as compared with 37 per cent of older children.[5] In another, 3 per cent of appendices had perforated after 12 hours of symptoms, 50 per cent after 24 to 36 hours, 64 per cent after 36 to 48 hours, and 90 per cent after five days.[12] It is by decreasing the delay

prior to operation, especially in the very young, that the fatality rate of this disease can be reduced. That the type of treatment has marked influence upon the mortality can be seen by comparison of present statistics with those prior to the use of sulfonamides, antibiotics, and the preoperative and postoperative care practiced today. In one series,[10] the fatality rate in acute non-perforated appendicitis has fallen from 6.06 per cent during the period between 1924 and 1929, to zero during the interval 1940 to 1944. In another series[12] the mortality in acute appendicitis with perforation was 6.43 per cent prior to 1938, and 2.99 per cent between 1938 and 1944. The overall child fatality rate in this same group decreased from 3.06 per cent (1928-1939) to 1.58 per cent (1939-1945). Each series under discussion included over 500 cases. Perforated appendicitis in patients between the ages of one to four years now accounts for practically the entire mortality.

SUMMARY

1. Children under 14 years of age account for almost one-fourth of the overall incidence of acute appendicitis.

2. Certain anatomic factors of the child's appendix and its relationship to the peritoneal cavity favor relatively early perforation and poor localization of the infection.

3. "Abdominal pain, vomiting, and slight fever should always be considered as due to acute appendicitis until proved otherwise."

4. Principles of treatment recommended are:

a. Operation as soon as possible after the diagnosis is made and the patient adequately prepared;

b. Laparotomy if there is a reasonable doubt as to the diagnosis;

c. The use of the McBurney incision in most instances;

d. Removal of the appendix concurrently with drainage of an appendiceal abscess;

e. Drainage of the abdomen in most cases of acute perforated appendicitis.

5. Refinements of treatment and the addition of chemical and antibiotic therapeutic agents have materially decreased the fatality rate of acute appendicitis in children.

6. The chief factors affecting the mortality at present are the age of the patient and the delay prior to operation.

7. Practically all the deaths due to this disease in children fall within the group of acute perforated appendicitis between the ages of one and four years.

8. Special effort should be made to expedite the diagnosis in the very young, thus reducing the preoperative delay, and consequently the mortality.

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REFERENCES

1. Brenneman, J.: Abdominal pain in children, J.A.M.A., 127:691-695 (March 24), 1945.

2. Chaffin, L.: Acute conditions in abdomen as they concern general practitioner, J.A.M.A., 132:317-321 (Oct. 12), 1946.

3. Crile, George, Jr.: Peritonitis of appendiceal origin treated with massive doses of penicillin, Surg., Gynec. & Obst., 83:150-162 (August), 1946.

4. Green, H. W., and Watkins, R. M.: Appendicitis in Cleveland; final report, Surg., Gynec. & Obst., 83:613-624 (November), 1946.

5. Hudson, H. W., Jr., and Chamberlain, J. W.: Acute appendicitis in childhood; statistical study of 848 cases from Children's Hospital, Boston, J. Pediat., 15:408-425 (Sept.), 1939.

6. Jones, Thomas E.: Inflammatory lesions of colon; surgical aspect, J.A.M.A., 126:1013-1015 (Dec. 16), 1944.

7. Keyes, E. L., and Cook, M. M.: Diagnosis of acute appendicitis in presence of diarrhea, Arch. Surg., 52:429-444 (April), 1946.

8. Mueller, R. G.: Ann. Surg., 122:625-630, 1945.

9. Newell, E. D.: Gangrenous suppurative appendicitis; 48 consecutive cases with removal of appendix, Ann. Surg., 123:900-901 (May), 1946.

10. Norris, W. J.: Appendicitis in children; review of 1,000 cases taken from records of Children's Hospital, Los Angeles, West. J. Surg., 54:183-192 (May), 1946.

11. Ravdin, I. S.: "Appendicitis"; "A textbook of medicine," edited by R. L. Cecil, W. B. Saunders, Philadelphia, Ed. 7, 1947, pp. 818-823.

12. Scott, H. W., and Ware, P. F.: Acute appendicitis in childhood, Arch. Surg., 50:258-268 (May), 1945.

13. Strauss, Alfred A.: Abdominal pain in children from surgical standpoint, J.A.M.A., 128:330-334 (June 2), 1945.

14. Wangensteen, O. H., and Bowers, W. F.: Significance of obstructive factors in genesis of acute appendicitis; experimental study, Arch. Surg., 34:496-526 (March), 1937.

CASE REPORTS

◀ Persisting Hiccups ◀ Post-Anesthesia Respiratory Difficulty ◀ Scrotectomy for Scrotal Elephantiasis ◀ Mesenteric Vascular Occlusion

Persisting Hiccups

JOHN A. STILES, M.D., *Palo Alto*

THIS is a report of a case of a 62 year old man with a history of hiccups of 40 days' duration, starting two days after he stopped smoking. The patient was ambulatory and visiting around the country between Chicago and San Francisco for the first 38 days of his disease. On entrance to the hospital, laboratory findings revealed nothing significant. Physical examination was essentially negative except for the hiccups at a rate varying between 8 and 16 per minute. There was a history of mild bronchial asthma and one mild coronary attack about one year previously.

The hiccups were relieved by carbon dioxide inhalations and breathing into a paper bag. An attempt was made to block the phrenic nerves; the right was apparently blocked but the left was not. This did not give any relief. On the 41st day 90 mg. of intocostrin was given. (The patient's weight was 135 lbs.) This was sufficient to paralyze respirations completely for 20 minutes, and during that time oxygen was given, and for the subsequent 15 minutes the patient was given a 50-50 nitrous oxide-oxygen mixture to breathe until respirations returned to normal. After this treatment the hiccuping stopped for about five hours, then returned at a slower rate, approximately four to eight per minute. Twenty-four hours later sodium amytal was given, 0.5 gm. intramuscularly, followed 20 minutes later by another 0.4 gm. of the same drug. The patient then slept ten hours without hiccups, and this period was followed by six hours with occasional hiccups while awake. Twenty-four hours later 1 gm. of sodium amytal was given intramuscularly and the same period of sleep and relief of the hiccups followed. Thereafter the patient remained free of hiccups.

Post-Anesthesia Respiratory Difficulty

A five-hour anesthetic was administered to a 65 year old man for a left pneumonectomy. The method used had been endotracheal nitrous oxide, supplemented with intravenous curare and morphine. The operation and anesthetic were both uneventful and the patient left the operating room in good condition, his reflexes present.

During the few minutes necessary to transport him to his room he was given oxygen by means of a bag and mask. About ten minutes after leaving the operating room, slight dyspnea was noted, and this became marked in a few minutes; positive pressure on the breathing bag was necessary to effect a good exchange. Within five minutes of the onset of the more marked dyspnea, this method no longer kept the patient oxygenated. The pulse rate began to rise and shortly was over 120 per minute, increasing rapidly. At the same time, cyanosis became evident. At this point the patient lost consciousness and reintubation was performed, whereupon the cyanosis disappeared and the pulse rate decreased slightly. Even by this means, respiratory exchange was difficult and inadequate.

To percussion the left chest showed increased resonance and the heart was definitely shifted to the right. A large needle was inserted in the left pleural cavity with almost immediate return of spontaneous respiration and further decrease in pulse rate. The needle was left in place for 24 hours, connected to a rubber tube the end of which was left under water seal. Recovery was uneventful.

1492 Emerson.

Chairman's address, read before the Section on Anesthesiology at the 76th Annual Session of the California Medical Association, April 30-May 3, Los Angeles.

Scrotectomy For Scrotal Elephantiasis

PERRY BONAR, M.D., *San Rafael*

ELEPHANTIASIS arabum (tropicum), an obstructive lymphatic disease produced by repeated mosquito inoculation of filaria bancrofti, is a fairly common finding among the natives of some of the Pacific Islands.

While on Naval duty in the New Hebrides Islands in 1943, the author was called in consultation by the French Mission Surgeon to examine a native who had been afflicted for the past ten years with scrotal elephantiasis.

CASE REPORT

Examination revealed a well developed and nourished Melanesian male about 40 years of age encumbered by a large scrotal mass measuring approximately 20 x 14 inches, as shown in Figure 1.



Figure 1

Consistency of the scrotal skin was leathery and obviously diseased except in the region of the apex of the mass where its appearance was comparatively normal. The bulk of the mass was "doughy" to palpation.

Surgical removal of the diseased scrotal tissue and plastic reconstruction to cover the penis and testicles was the only feasible curative procedure to be considered.

To facilitate handling the mass during operation, two hooks were rigged to an overhead tackle and placed in the dependent tissue.



Figure 2



Figure 3

A "U" scrotal incision was made 2 cm. laterally from each pubic tuberosity downward to meet just below the orifice of the drawn down foreskin.

By progressive dissection with a guiding sound in the urethra, the body of the penis was delivered from the scrotal mass. Both cords and testicles were then isolated and delivered by blunt dissection and found to be normal except for elongation of the cord to about 8 inches.

With the penis and testicles free and placed on the lower abdomen, two flaps were fashioned from the lateral aspects of the upper scrotum by two incisions extending from each pubic tuberosity downward and backward to join in the mid-line, posterior to the scrotum. This procedure was greatly facilitated by the employment of the previously described tackle arrangement. The scrotal mass was severed and residual diseased tissue was removed to expose the transverse perineal muscles (Figure 2). Only slight vascularity was encountered in the deep tissues in comparison to the very marked vascularity encountered during the superficial dissection. Both spermatic cords were shortened by a loose gathering suture and the appropriate skin edges approximated by interrupted dermal sutures to form a new scrotum and penile covering. A rubber dam drain was placed in the dependent angle of the scrotum.

The postoperative course for several days was rather stormy with temperature reaching 104° F. and considerable seropurulent drainage, most abundant from the scrotal region. Edema of the penile skin was marked but this completely subsided at the end of four weeks, at which time healing was complete (Figure 3).

Pathological examination of the removed scrotal tissue revealed marked connective tissue proliferation, interstitial edema and markedly dilated lymphatic vessels. There was no evidence of the presence of microfilariae in either the expressed lymph or in numerous stained tissue sections.

Surgical and functional results were gratifying and remained so at the end of eight months when the patient was last examined in his jungle habitat.

The author is deeply grateful to Dr. Charles Dinardo of Cleveland and Dr. Charles Steiss of San Francisco for their able assistance in the performance of this unusual operation.

1322 Fifth Avenue.

Mesenteric Vascular Occlusion

Albert H. Newton, M.D., *Yreka*

THE occurrence of mesenteric vascular occlusion is infrequent enough (573 cases reported up to 1946, with 36 cases successfully resected) to warrant a report of six cases in which the author has operated.

Mesenteric vascular occlusion may be venous or arterial or both. Gradual occlusion of a superior mesenteric vessel may occur without abdominal symptoms. If sudden occlusion of a main branch of the superior mesenteric vessel occurs, necrosis and gangrene result. Embolus or thrombus precede arterial occlusion; in venous occlusion thrombosis occurs.

The causes of venous and arterial occlusion of the mesenteric vessels are many: Hematogenous, portal obstruction; cardiac valvular disease; septic abdominal lesions; intestinal lesions; puerperal sepsis; degenerative diseases (such as arteriosclerosis); mechanical damage, and obstruction. Hernias and volvulus are excluded. In many cases there is no apparent cause.

In its clinical features, mesenteric vascular occlusion is characterized by pain which may be dull and cramping or sudden and severe. The pain is centrally located and in-

Read before the sections on General Medicine, Neuropsychiatry, and Industrial Medicine and Surgery at the 76th Annual Session of the California Medical Association in Los Angeles, April 30-May 3, 1947.

cessant, not accompanied by muscle spasm or extreme tenderness. Three points are distinct features of the pain: (1) It is more severe than clinical findings warrant; (2) It is not alleviated by morphine; (3) There is much less tenderness than might be expected with such intense pain. The leukocyte count is variable; pulse rate is high in relation to temperature; dehydration occurs rapidly; abdominal distention occurs late; there is no definite pathognomic sign or symptom.

Failure to diagnose the disease may be due to the comparatively low incidence of it. (There were 44 cases of it in 41,982 admissions to the Michael Reese Hospital in a ten-year period; 17 cases occurred at Bellevue Hospital from 1939 to 1944; there were 13 cases in 300,000 admissions to the New Orleans Charity Hospital.)

The mortality rate is high—84 per cent in a series of 19 cases in which operation was done by Whittaker and Pemberton. Three successful cases of resection were reported in a series of 15 cases by Ficana in 1944. Each year since 1895 when Eliot reported the first successful resection of the small intestine for mesenteric thrombosis, there have been reports of individual cases. The reason for reporting them may be that this entity is so infrequently encountered by the average surgeon. Or it may be because the pathological process revealed at operation is so dramatic that it leaves an everlasting impression on the surgeon's mind, especially in those cases in which resection produces an operative cure.

Extensive mesenteric occlusion is fatal unless treated surgically. Complete removal of the affected bowel and mesentery, with immediate anastomosis, produces the best results. The use of anticoagulants with operation is advised.

The following six cases occurred in 23,350 admissions to the Siskiyou County General Hospital from January, 1933, to January, 1947.

CASE REPORTS

Case 1.: A married woman, aged 31, para 4, well developed and well nourished, was admitted to the hospital September 6, 1933, with a history of sudden, severe abdominal pain which had begun two hours previously. Pain caused complete physical collapse.

The abdomen was tender to palpation. There was a low mid-line abdominal operative scar in good condition. The pain, which was generalized on admission but after several hours was localized in the lower abdomen, was not relieved by morphine. The leukocyte count was elevated, the urine negative. Fifteen hours after admission, the patient was taken to surgery and when the abdomen was opened through a low mid-line incision, approximately 25 cm. of small bowel was found to be gangrenous. The gangrenous bowel was resected, the efferent and afferent loops were exteriorized, and the wound was closed with drainage.

The pathological specimen showed a 30 cm. segment of intestine with thickened turgid walls and hemorrhagic discoloration.

The postoperative course was stormy, and three weeks later a secondary operation was performed, the exteriorized loops of bowel freed and a side-to-side anastomosis done.

Recovery then was uneventful, and the patient now has been in good health for 14 years.

Conclusion: Mesenteric venous thrombosis involving 30 cm. of ileum with complete recovery by operative resection.

Case 2: A 74-year-old woman, para 4, entered the hospital January 30, 1935. The complaint upon admission was severe abdominal pain. Pain had begun one hour before admission. A cancer of the breast had been diagnosed one month previously.

The pulse was 120, the leukocyte count 16,000. Urinalysis showed a trace of albumin. Intense abdominal pain was little relieved by morphine. The patient, whose condition was generally poor, was operated upon the morning after admission.

When the abdomen was opened through a high mid-line incision, the intestine was found to be massively distended and the entire small bowel and the ascending colon were dark and discolored. There were palpable metastatic cancerous nodes throughout the retroperitoneum. Thombosis of the superior mesenteric artery was demonstrated. The abdomen was closed and the patient died of circulatory failure ten hours later.

Diagnosis: Carcinoma of the breast with retroperitoneal metastasis and thrombosis of the superior mesenteric artery with gangrene of the entire small bowel and ascending colon. Permission for autopsy was refused.

Case 3: A 51-year-old man entered the hospital February 7, 1936, with a complaint of acute abdominal cramp-like pain associated with fever and rapid pulse. The patient had been acutely ill for two days.

The leukocyte count was elevated, the heart was enlarged and was fibrillating. There was excessive vomiting. The patient was taken to surgery on the day of admission. Through a high right rectus incision, the abdomen was found to be filled with dark fluid. There was a large indurated mass involving the pylorus of the stomach, and the mesentery of the small bowel was studded with cancerous nodules. About 50 cm. of small bowel was found to be discolored and necrotic. Resection of the necrotic bowel was started but the patient suddenly died. Permission for autopsy was not obtained.

Conclusion: Carcinoma of the stomach with retrograde metastasis and venous thrombosis with gangrene of the small bowel.

Case 4: A 31-year-old woman, well developed and well nourished, para 1, entered the hospital June 28, 1938, with a complaint of acute abdominal pain. Illness had begun two days previously with acute colicky pain in the abdomen associated with vomiting.

Examination revealed abdominal distention. The patient had been operated upon a year previously for pelvic disease. The general physical examination was negative except for rapid pulse and vomiting. Pelvic examination revealed a mass in and about the uterus. The leukocyte count was 14,000.

Under spinal anesthesia the low mid-line scar was resected, the abdomen was opened and a segment of necrotic small bowel was found adherent to the fundus of the uterus. There was a wedge-shaped portion of the mesentery which was edematous. Twenty cm. of ileum was resected and an end-to-end anastomosis was done with a proximal ileostomy. The resected specimen showed hemorrhagic discoloration and some fibrin deposited on the surface. The mucosa was ulcerated and was replaced by greenish surface covered with fibro purulent exudate.

Recovery was uneventful and the patient remained in good health until 1943 when the uterus was removed because of uterine fibroids with menorrhagia. When last interviewed, in March, 1947, the patient had no complaints.

Conclusion: Mesenteric venous thrombosis, probably due to postoperative adhesions with torsion of the bowel, cured with bowel resection.

Case 5: A woman, 47 years of age, para 4, was admitted to the hospital August 7, 1946, with a complaint of severe abdominal pain with vomiting of four days' duration. The patient's abdomen was distended and there was fecal vomiting. The temperature was normal, pulse was 92. The leukocyte count was 3,550 with normal differential. Urinalysis showed a trace of albumin. Repeated saline enemas gave negative results.

Under spinal anesthesia the abdomen was opened through a mid-right rectus incision. Intra-abdominal exploration revealed a markedly distended gangrenous small bowel and an extensive mesenteric thrombosis. One hundred and twenty-five cm. of gangrenous bowel was resected. No attempt was made to anastomose the proximal and distal loops because of the poor condition of the patient. The loops were exteriorized through the operative wound.

The postoperative course was stormy. On September 16, 1946, the patient was operated upon again, and through a left rectus incision the exteriorized loops of bowel were freed and an end-to-end anastomosis of the proximal and distal loops was done. A draining fecal fistulous tract developed through the original operative wound.

Discharged from the hospital October 15, 1946, as improved, the patient remained at home as a semi-invalid during the next two months. The fecal fistulous tract persisted. The patient was rehospitalized December 5, 1946, and the fistulous tract was resected down to the site of the bowel anastomosis. The opening into the bowel was closed. The patient returned home nine days later and died suddenly December 19, 1946.

At autopsy the small bowel showed inflammatory changes at the anastomosis site. The vena cava was filled with clotted blood. The gross appearance of the heart, liver, and kidneys was structurally normal. The left lung was compressed. The gross appearance of the section of bowel which had been removed at operation showed thickening of the wall with effusion of blood into the wall and very friable hemorrhagic mucosa. Microscopic sections of the surgically removed bowel showed discoloration, marked venous stasis and edema and interstitial hemorrhage with early fibrous proliferation. The heart muscle showed interstitial edema. Section of the compressed lung disclosed a segment of blood clot which showed the structure of antemortem clot or thrombus.

Pathological diagnosis: Surgical specimen: small intestine showing extreme venous stasis, edema and hemorrhage, consistent with mesenteric thrombosis. Necropsy specimen: heart, showing interstitial edema of the myocardium; lung, showing emholus.

Final diagnosis: Mesenteric venous thrombosis, undetermined origin, interstitial myocardial edema and pulmonary embolus.

Case 6: A 64-year-old man was admitted to the hospital December 15, 1946, with a complaint of severe abdominal pain and vomiting of five days' duration. The abdomen was distended, the heart was enlarged in all diameters and was fibrillating. Repeated enemas were unavailing. The leukocyte count was 8,200 with normal differential, and red blood cells numbered 2,580,000, with hemoglobin 48 per cent. Blood transfusions were given the patient on the first and second day after admission, and on the third, under spinal anesthesia, the abdomen was opened. Exploration revealed gangrenous ileum adherent to the shelf of the left sacral crest. Approximately 75 cm. of ileum was resected and an end-to-end anastomosis was done. The abdomen was closed without drainage.

Pathological examination: The wall of the removed segment of bowel was thickened, turgid and showed a hemorrhagic discoloration with some fibrin deposited on the surface.

Microscopic description: The most involved segment of bowel showed mucosal ulceration. A section of mesentery in the more involved zone showed a venous thrombosis and a mesenteric fat suffused with blood.

Pathological diagnosis: Mesenteric veni thrombosis with sub-acute inflammation and ulceration of the small intestine.

The patient was discharged January 16, 1947, in improved condition. Since discharge from the hospital, the patient has returned to his usual occupation. When last interviewed, March 27, 1947, he had regained his former weight and strength.

Final diagnosis: Chronic myocarditis with auricular fibrillation and decompensation. Mesenteric venous thrombosis, cured by operative resection.

CONCLUSION

Six cases of mesenteric vascular occlusion surgically treated, with 50 per cent mortality.

REFERENCES

1. Chesterman, J. T.: Two effects of retrograde venous thrombosis in intestinal strangulation, Journal of Pathology and Bacteriology, 56, 1944.

2. D'Abreu, F., and Humble, J. G.: Mesentery venous thrombosis, Lancet, April, 1946.

3. Doran, W. T.: Mesenteric thrombosis of the terminal ileum, American Journal of Surgery, January, 1944.

4. Ficana, B. F.: Mesenteric vascular occlusion, American Journal of Surgery, 66, 1944.

5. Fox, Paul: Mesenteric thrombosis with postoperative administration of dicumarol, Ill. Medical Journal, December, 1944.

6. Geis, A. F.: Mesenteric thrombosis, American Journal of Surgery, 65, 1944.

7. Laufman, Harold: Mesenteric occlusion, American Journal of Surgery, 58, 1942.

8. Lesh, Ruth: Mesentery thrombosis, American Journal Obstetrics and Gynecology, October, 1945.

9. Luke, J. C.: Mesenteric thrombosis, Lancet, 552, 1931.

10. Otken, L. B.: Mesenteric vascular occlusion, Mississippi Doctor, 22, 1942.

11. Pringle, L.: Mesenteric vascular occlusion, Irish Medical Journal, 6, 1942.

12. Rendick, R. A.: X-ray observation in mesenteric thrombosis, American Journal Roentgenology, 52, 1944.

13. Scott, R. A. Murray, and Lissimore, N.: Mesenteric thrombosis in lymphatic leukemia, Lancet, 1944.

California Cancer Commission Studies*

Chapter XV

Cancer of the Thyroid

Robertson Ward, M.D., *San Francisco*

THE *prevention* and *early recognition* of cancer of the thyroid is usually the responsibility of the family doctor. Certain facts have been established which will aid in the management of patients with thyroid tumors. These facts are as follows:

1. There are no pathognomonic signs of *early* cancer of the thyroid.

2. Almost all cancers arise in *nodular* goiters.

3. Five per cent of clinically benign nodular goiters in adults prove to be malignant on pathological examination.

4. Ten to 20 per cent of multi-nodular goiters in men are found to be malignant on pathological examination.

5. Solitary tumors of the thyroid should be considered as precancerous lesions at any age, because approximately 20 per cent will be found to be cancer on pathological examination.

6. Thyroid tumors in children are particularly prone to malignant change.

7. The eventual prognosis in most cases is determined by the physician who first sees and advises the patient.

The usually recognized (textbook) signs of thyroid cancer are really signs of impending death. Rapid growth, fixation to surrounding tissues, hoarseness, tracheal pressure, dysphagia, hardness of the mass and enlargement of the surrounding lymph nodes—any combination of these usually means not only the presence of cancer but its spread past the capsule of the thyroid gland. When it is realized that the recognition of malignant change by gross and microscopic examination is, many times, extremely difficult for a trained pathologist, it will be understood that early clinical recognition in most cases is impossible. The lesson to be learned from this is not to wait for these late diagnostic signs.

In determining what cases should be suspected of malignancy there *is no more valuable point than the presence of a nodular goiter.* This eliminates from serious consideration the diffuse toxic (exophthalmic) goiter, the simple hypertrophy of adolescence and pregnancy, and in many cases the chronic indurative thyroiditis which conforms to the normal shape of a diffusely enlarged thyroid gland. As carcinoma almost never occurs in such glands the problem of cancer becomes the problem of *nodular goiter.*

The field having been narrowed to nodular goiter, the question is: "In what cases should thyroidectomy be advised?" The thyroid goes through cycles of activity and regression which are said to lead to multi-nodular thyroids in older women. Just as cancer can arise in breasts which are a site of alternate hypertrophy and involution, so can it arise in thyroids having undergone the same changes. In this type of multi-nodular goiter of long duration, any recent changes such as acceleration of the rate of growth or the advent of pressure symptoms suggesting an accelerated growth, should demand immediate surgery. The symptoms which should arouse suspicion are any of the following: A feeling of tightness, dysphagia, cough, enlarged superficial veins (which denote back pressure on the jugulars), easy fatigue of the voice, substernal distress and difficulty in breathing at night when lying on one side or the other. Opinion regarding the advisability of operation for all multiple nodular goiters will vary from the enthusiastic advocate of removing all nodular goiters to the "conservative" point of view which advises operation only when there is evidence of damage to the patient through pressure or toxic manifestations. Many thyroids on palpation reveal an irregularity of outline. This does not necessarily mean adenomatous growth. One must distinguish between physiological irregularity and adenomatous nodules. It is advisable to remove the latter, but not the former. Because there are no clinical signs of early malignancy in the thyroid it becomes necessary to use a statistical "finger of suspicion" to segregate the potential culprits from the larger group.

The statement that "almost all malignancies arise in *nodular* goiters" is true in two ways: First, many cancers arise in pre-existing nodular goiter; second, primary malignancies not arising in an adenoma tend to distort the thyroid gland into a nodular goiter. This conclusion is emphasized in order to eliminate diffuse goiter and concentrate attention upon nodular goiter.

It is advisable to outline the particular groups of nodular goiter from which the 5 per cent of malignancies arise. In which patients with nodular goiter should we advise surgical removal?

The first general group is males! In a rather large clinic series there was one cancer in each 8.3 males with nodular goiter, while in a series of private patients there was the almost unbelievable figure of one malignancy to each six male patients with nodular goiter. These figures can bear more emphasis than has been given previously. Nodular goiter will be found from six to ten times more frequently in women than in men but the likelihood of malignancy is three to four times greater in the male patient. *This should lead the physician always to advise sur-*

* Organized by the Editorial Committee of the California Cancer Commission.

gical removal in males with nodular goiter. If he does not, he is exposing his patient to one chance in six to eight of the goiter becoming malignant, if it has not already done so.

The second and larger group segregated by the statistical "finger of suspicion" are those patients, male or female, young or old, who have solitary tumors of the thyroid gland. A recent careful and painstaking analysis[3] of 96 patients in whom solitary non-toxic nodules were found clinically and at operation showed 15.6 per cent to have malignant neoplasms, and an additional 22 per cent to have benign neoplasms. Cole[1] has recently reported 24 per cent of solitary, non-toxic nodules to be malignant. Again the physician who assures such a patient that there is no cause for alarm takes an unwarranted risk with his patient's life. *Solitary adenomas should be removed.* (Figures 1 and 2.) (The plan of treatment will be outlined later.)

The third group which should fall under suspicion merely because of the presence of a tumor in the thyroid gland or laterally in aberrant tissue, is children. In children, as in males, there is no physiological explanation for nodules in the thyroid gland. As was pointed out previously, bouts of increased activity alternating with involution explain many of the multi-nodular goiters of mature women, while in children and adult males no such mechanism has been at work and the relative percentage of neoplastic nodules is thereby increased many fold. Kennedy[2] found 19.3 per cent malignancy in 62 children under 15 years of age with nodular goiter. Another series shows 40 per cent malignancy in ten children in the same age group.[4]

The seventh statement in the introduction to this presentation, that "the eventual prognosis in most cases is determined by the physician who first sees and advises the patient," is incapable of proof. However, there are certain statistical reasons for the statement. *It has been shown that an excellent prognosis can be given four out of five patients in whom malignancy is first discovered upon pathological examination; that approximately 50 per cent of those in whom malignancy is suspected at operation will be cured, and that four out of five of those in whom malignancy was suspected clinically before operation have had recurrence or died from the disease.* These statistics coupled with the author's experience of hearing the almost universal story of having been advised to "let the lump alone until it begins to bother you" have led to the belief that the family physician or *first doctor consulted may, by his advice, avoid half the tragic results encountered in the treatment of advanced cancer of the thyroid.*

TREATMENT

As in all malignancy, early recognition and adequate treatment are the solution to the problem of malignant goiter. Adequate treatment is complete surgical removal followed by x-ray therapy in cases where there is doubt as to the complete removal.



Figure 1. Malignant adenoma of six months' duration in a 23-year-old woman. Despite its small size and short duration it had infiltrated the trachea and recurrent laryngeal nerve.

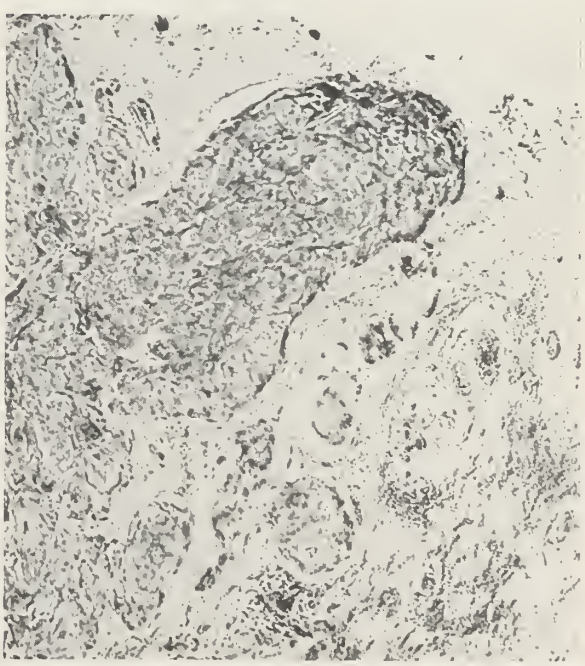


Figure 2. Photomicrograph of same tumor as shown in Figure 1. Patient is living and well six years after operation and has had two children.

Successful removal depends upon the stage of advancement at the time of operation, and this again depends upon a proper degree of suspicion on the part of the patient's medical adviser. If you or I, as medical adviser, will be armed with the seven conclusions with which this presentation was begun, we will be suspicious enough to recommend surgical removal in the following instances, and in so doing will save at least half of those otherwise doomed by the disease.

One is completely justified in advising operation for all men with nodular goiter; for all patients, male or female, with solitary tumors of the thyroid, especially if they are non-toxic; for all children with nodular goiter or aberrant thyroid nodules; and finally, for all patients who show recent increase in size, pressure symptoms or dysphagia in long-standing nodular goiters. In these groups will be found the early carcinomas. For this reason a nodule should never be enucleated, but that lobe of the thyroid containing it should be excised, leaving only the posterior capsule.

If, on the other hand, the patient demonstrates clinical signs of malignant goiter a biopsy should be performed and the type of treatment determined by the pattern and degree of malignancy of the biopsied tissue. If the pathological pattern is predominantly papillary, an attempt should be made to remove the bulk of the tumor and follow with adequate x-ray therapy. If the picture is predominantly anaplastic, one is hardly justified in recommending radical operation, and even the value of irradiation for palliation is questionable.

In association with a nodular goiter the presence of palpable enlarged lymph nodes in the neck lateral to or above the thyroid gland is almost pathognomonic of cancer. However, it has been shown that local lymphadenopathy is rare except in papillary carcinoma. Thus, although lymph node metastases are of grave import, they by no means should be considered contraindication to surgical removal of the primary lesion and metastatic nodes combined with postoperative irradiation. The papillary type of tumor from which they commonly take origin is the most responsive to roentgen therapy and the most prone to long periods of remission.

Experience of the past ten years has shown that carcinoma of the thyroid is curable if treated early or if of papillary pattern which responds well to irradiation. The old saying that "a diagnosis of malignant goiter means impending mortality" holds true only in those cases where the clinician waits for the classical clinical signs before becoming suspicious or where the pathological type of the neoplasm has shown it to be uninfluenced by surgical or x-ray therapy.

A primer of "don'ts" designed to save patients with malignant goiter would read as follows:

1. Don't wait for signs of cancer. There are none pathognomonic of early malignancy.

2. Don't forget the ever-present threat of *nodular goiter.*

3. Don't forget that your patient may be the one in 20 with an unsuspected malignancy.

4. Don't neglect to recommend operation in children or men with nodular goiter.

5. Don't neglect to advise surgical removal of solitary tumors of the thyroid.

6. Don't be guilty of telling your patient: "That lump in your neck is harmless; wait till it bothers you."

7. Don't be pessimistic about carcinoma of the thyroid if you have followed the above advice; four out of five of your patients will have a good prognosis.

REFERENCES

1. Cole, W. H., Slaughter, D. P., Rossiter, L. J.: The potential danger of non-toxic goiter, J.A.M.A., 127, 883-888 (April 7), 1945.

2. Kennedy, R. L.: Nodular goiter among infants and children, Tr. Am. A. Study of Goiter, 1940, p. 322-326.

3. Soley, M. H., Lindsay, S., Dailey, M. E.: The clinical significance of a solitary nodule in the thyroid. Western J. Surg. Obs. Gynec., 56:96-104, 1948.

4. Ward, R.: Malignant goiter, lessons to be learned from a 20-year follow-up, West. J. Surgery, Obs., Gynec. In process of publication.

California MEDICINE

OWNED AND PUBLISHED BY THE CALIFORNIA MEDICAL ASSOCIATION
450 SUTTER, SAN FRANCISCO 8 PHONE DOUGLAS 2-0062

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EDITORIALS

Non-Calculous Biliary Tract Disturbances

Persistent symptoms, presumably arising from the extrahepatic biliary tract and not associated with cholelithiasis, constitute a perplexing clinical problem. Cases presenting symptoms of this type have been grouped by some physicians under the designation of "stoneless gallbladder." This possesses the merit of reflecting recognition of the uselessness of cholecystectomy in the absence of gallstones, with only a few exceptions. Actual coexistence of these disturbances and cholelithiasis accounts for some of the poor results following adequate surgery for gallstones. This is well demonstrated by the fact that when common duct exploration is done on a group of cases because of persistent symptoms after cholecystectomy, those without previous stones are usually not helped, and of those who previously had stones and who have common duct stones at the time of the second operation, a few may have persistent symptoms after removal of these stones.

The term "post cholecystectomy syndrome" implies the exclusion of certain important lesions. It must be known that the cystic duct has not been converted into a "re-formed gallbladder" and that stenosis of the papilla does not exist. Also, a complete exploration of the abdomen, especially for hiatus hernia and chronic pancreatitis, should have established the absence of coexistent lesions. Neurosis may have simulated gallbladder disease or may have been associated with it and modified the result. Residual postoperative symptoms may therefore be due to obscure or functional disturbances antedating the surgery. Frequently they are suspected before surgery is contemplated. In some such instances disturbed cholesterol metabolism has been thought to be at fault, others have been classified as instances of biliary dyskinesia.

The biliary tract is extensively involved in fat metabolism. Ingested fat greatly influences the motor functions of the gallbladder. The bile contains the bile salts necessary for absorption of digested fats, and the absorbed fats are processed in the liver. Lipid fractions in the plasma such as neutral fats, fatty acids, phospholipids, cholesterol esters and free cholesterol, are all resultant substances, with important inter-relationships. Free cholesterol is excreted into the bile. Its crystals are found in nearly all gallstones, and are characteristically seen in the bile in instances of cholesterosis of the gallbladder, although the deposits in the gallbladder mucosa in cholesterosis are cholesterol esters which are not contained in bile. These esters are contained in foam cells, as in the xanthomatoses. Although the bile cholesterol content varies with the blood cholesterol, cholesterosis of the gallbladder may occur in the presence of normal blood cholesterol values. The mechanism controlling blood cholesterol levels is poorly understood. Thyroid function bears a direct relationship to the blood cholesterol level, but the mechanism is unknown. Liver disease also is a recognized factor. The blood cholesterol consists of an exogenous (ingested) fraction and an endogenous fraction. Feeding a high or low cholesterol diet to normal animals produces only a temporary rise or fall in the blood level. Apparently the enzyme systems involved have a significant capacity to compensate. In the interpretation of the innumerable blood cholesterol determinations in clinical practice, the associated presence or absence of hyperlipemia (milky serum) and xanthomatosis should be considered. Hyperlipeminia may have some relationship to right upper quadrant pain, and may be an element in the pseudo-biliary colic of portal cirrhosis. Pregnancy bears some relationship to hypercholesterolemia, and a clear relationship to cholelithiasis, but again the exact mechanisms involved, are not clear. To correlate all the foregoing, and thereby improve

our understanding of cholesterosis of the gallbladder and its dietary treatment is exceedingly difficult. Ideally, clear distinction should be drawn between a low cholesterol diet for cholesterosis and the low fat dietary management of cholecystitis, which influences motor function of the gallbladder and associated obesity. Because such a low fat diet is inherently a low cholesterol diet clinical conclusions are bereft of exactness. In therapy, the low fat, high protein diet is in consonance with recent progress. The high protein factor is added because high protein intake is the most effective natural means of promoting bile flow.

Functional motor disturbances of the common duct sphincter may be productive of pain simulating gallbladder disease ("pseudo cholecystitis"). This syndrome of biliary dyskinesia is dependent upon sphincter hypertonus producing hypertension in the biliary ducts. The secretory pressure of the liver and contractility of the gallbladder furnish the force while the unrelaxed sphincter provides the resistance. The sphincter dysfunction is apparently neurogenic. A close relationship of the sphincter to the duodenum and colon appears to exist. Disappearance of both biliary tract distress and delayed emptying of the gallbladder may follow proper management of the duodenal pre-ulcer syndrome or of an irritable colon. Perhaps the best criterion so far developed for the diagnosis of biliary dyskinesia is prompt relief by nitrite. Organic disease of the gallbladder should be excluded by cholecystography, as the sphincter spasm may be reflex from organic gallbladder disease. It is here that the admonition to avoid giving pathological significance to delayed emptying of the gallbladder has its real importance. Such delayed emptying of a radiologically normal gallbladder is indicative of motor dysfunction of the sphincter and not of cholecystitis. It is possible that the new tetra ethyl ammonium compounds will be of diagnostic value in this group of cases. The major problems arise in those instances of this disturbance where, after unwarranted cholecystectomy, the symptoms progress and nitrites lose their effectiveness, and narcotics are often employed. Surgical relief may be sought. Surgeons have met this problem by anastomosis of the common duct to the duodenum above the sphincter, by cutting the sphincter, or by dilating it. Also the common duct has been stripped to accomplish the equivalent of arterial stripping for ablation of sympathetic nerve fibers. There has been no universal adoption of any of these procedures. Recently there has been a turn toward section of the sensory fibers. These are located in the right and left greater splanchnic nerves. Novocain block of the right splanchnic is known to have given prolonged relief. It has been observed that lesions of the abdominal viscera, such as acute cholecystitis, occur without pain in hypertensive individuals who have undergone splanchnicectomy. This new field may offer much to those few patients who have become invalids from a severe form of biliary dyskinesia or post cholecystectomy syndrome.

Required Reading

Because the underlying strength of reason which alone can prevail against the pressure for state medicine must derive ultimately from a well informed medical profession, attention is called to two periodicals that recently have begun publication to keep physicians abreast of what is being done and what can be done to combat the drive both through public relations and by a strengthening of voluntary medical care plans.

One of these publications is C.M.A. Public Relations News: the other C.P.S. Progress. The former is issued bi-monthly to all C.M.A. members, and the latter is sent quarterly to some 8,600 physician members of C.P.S. The Public Relations News reports activities carried on in C.M.A.'s behalf by its public relations counsel, together with news of pertinent legislation and opinions from other fields of collateral interest. C.P.S. Progess is a source of information to doctors on membership enrollment, finances, management problems, activities of other voluntary medical care plans, the contract for care of veterans of the armed forces, and other phases of C.P.S. operations.

With a grounding in public relations and a knowledge of economic aspects of medical care now so important to doctors in efforts to keep the practice of medicine free of bureaucratic fetters, C.M.A. members owe it to themselves, to their colleagues and to their patients to absorb the information in both publications.

In calling attention to these two periodicals, it should be noted that CALIFORNIA MEDICINE hereafter will give less space to material on the subjects dealt with by them. For that reason, files of both are suggested.

A. M. A. Interim Session

As was expected, the interim session of the A.M.A. House of Delegates was primarily a business meeting. The House has been given so many added responsibilities in recent years that the period allotted for business at the Annual Session has proved to be inadequate.

At the Cleveland interim meeting, held January 5 to 8, the House met for two days and a scientific meeting followed for another two days. Scientific and technical exhibits were shown and the entire scientific program was aimed at benefiting the general practitioner. This is the first such meeting staged by the A.M.A. and editorial opinion appears to indicate a favorable reaction to the scope and purpose of the session.

The biggest boost given the general practitioner at the Cleveland meeting was the award of a gold medal to the outstanding general practitioner of 1947. This award was authorized by the A.M.A. 1947 House of Delegates, the recipient to be chosen by a screening process which took potential candidates through the Section on General Practice and the

Board of Trustees before three final names were submitted to the House of Delegates.

When the nominees came before the House of Delegates, Dr. Archer Chester Sudan of Kremmling, Colorado, emerged as the winner after digests of the nominating recommendations had been read. Dr. Sudan settled down to practice in a town of about five hundred population some twenty-two years ago. He was the only physician in the area. From 1925 on, he has covered a radius of more than eighty miles, using dog sleds or sleighs when snow covered the mountain passes and made automobile travel impossible. He has carried on a general practice with a minimum of facilities and yet has found time to attend professional meetings, keep up with scientific advances and furnish leadership in his own county and state medical associations. Two years ago he served as president of the Colorado State Medical Society and at times has overcome road-blocking snowdrifts in the upper levels of the Rocky Mountains to keep his appointments. Typical of the stories told about him is the one of the road crew returning to him a fountain pen picked up after the summer thaw, with the remark that nobody but "Doc" would have been up in that high country during the winter. The general practitioner award given Dr. Sudan was richly deserved and his many friends in California have been pleased to see him the recipient of this first of a series of annual presentations.

Thus the general practitioner is given a little larger place in the medical sun which at times has shone more brilliantly on dramatic stories of the accomplishments of specialists. Thus the "forgotten man of medicine" is granted recognition for his untiring efforts to serve anonymously but for the common good. Archer Sudan, as he was the first to point out, is a symbol of the general practitioner. May his breed continue and thrive.

Clinical-Pathological Conference

FROM STANFORD UNIVERSITY SCHOOL OF MEDICINE POSTGRADUATE REVIEW COURSE, SAN FRANCISCO HOSPITAL, SEPTEMBER 11, 1947

The patient, a 44-year-old negro laborer, was first admitted to the Lane Hospital Medical Ward on September 13, 1944, complaining of shortness of breath for seven months. He had come to San Francisco from Texas and started very heavy work in a shipyard a month before the illness began. Nocturia began along with the dyspnea, which became increasingly severe; and for two or three months before admission he had had nocturnal dyspnea and orthopnea. In late July he had headaches and dizziness on getting up. Three weeks later his legs swelled, and he came to the Medical Clinic. The urine at this time showed a trace of albumin and many red cells; the following week it was normal except for 15 to 20 leukocytes per high power field. On September 6, the electrocardiogram was reported as showing: "Sinus rhythm, rate 94, P.R.O. 15 sec. QRS 0.06 sec. Tiny Q wave in lead 3. RS-T depressed and T inverted in leads 2 and 3, T flat in lead 1. Slight right axis deviation. Precordial T deeply inverted." The patient stopped work in the shipyards, and some infected upper teeth were extracted; but there was very little decrease in the dyspnea.

Family and Past Histories gave nothing of note except a story of gonorrhea and a papular penile lesion 24 years before.

Physical examination revealed temperature 37.8 degrees C., pulse rate 108, respiration 25, and blood pressure 105/70.

The patient appeared to be well nourished and in no acute distress. Neck vein distention and liver enlargement (two finger breadths) were described by the first two examiners, but not confirmed by a third later the same day. The chest was emphysematous with a few moist rales at the bases, and rhonchi and squeaks over the entire chest. The heart was slightly enlarged, with regular rhythm. A third heart sound was audible over the lower sternum and in the epigastrium. The spleen was not felt. Slight pitting edema was present below the knees. The reflexes were normal except for absence of ankle jerks.

Laboratory: Erythrocytes numbered 5.09 m, leukocytes 8,100 with normal differential. Hemoglobin measured 14.0 gm. per cent and the sedimentation rate was 10 mm. in one hour. The urine specific gravity was 1.012 and except for a trace of albumin it was otherwise negative. Examination of the stool was negative as was the Wassermann reaction. Venous pressure measured 12.5 cm. of water and the circulation time was 24 seconds. Vital capacity was 2,000 cc. An electrocardiogram made on September 19, disclosed increase in the degree of right axis deviation. On roentgenologic examination of the chest, the heart was found not enlarged but the pulmonary artery was dilated and marked emphysema was present. Plasma proteins measured 6.9 gm. per cent.

Digitalis and salyrgan were given, with a satisfactory diuresis and decrease in venous pressure to 10 cm., and in circulation time to 17 sec. The patient was discharged on September 26, 1944, and was followed in the cardiac clinic during the next two years.

On a dosage of 0.2 gm. digitalis daily a complete A.V. block was found November 6, 1944. It disappeared with a reduction in the dose, and the following month the patient was considered fit for light work. His main complaint was of shortness of breath for ten minutes on getting up in the mornings. This was considerably helped by aminophyllin.

At times the liver was found down 2 to 3 finger breadths, and in February, 1945, it was observed that the heart rate of 88 in the sitting position decreased to 44 when the patient was recumbent.

A chest x-ray done May, 1945, revealed "marked bulging of pulmonary conus with slight enlargement of the right ventricle. Large hilar shadow due to congestion of pulmonary vessels."

At times a presystolic gallop or split first sound was audible at the xiphoid; but there was no marked change in his condition until September, 1946, when the patient became much more dyspneic and edematous. On September 25, he was readmitted to the Medical Ward.

Physical examination disclosed temperature of 37.5 degrees C., pulse of 90, respiration of 32 and blood pressure 122/80. There was moderate dyspnea and orthopnea, and a marked distention of neck veins. The costal angle was wide and a moderate degree of emphysema was present. Breath sounds were faint at the left base, with a few crackles. Cardiac dullness was increased and sounds were faint over the precordium but loud and regular in the epigastrium, where there was a gallop. The abdomen was moderately distended and the liver enlarged and tender. Slight edema of the ankles was present.

Laboratory: Erythrocytes numbered 3,800,000; hemoglobin 11.7 gm.; leukocytes numbered 10,500. Urinalysis revealed only a trace of albumin. Sedimentation rate was 16 mm. in 1 hour. Vital capacity was 1,300 cc., plasma protein measured 6.2 gm. per cent and the icteric index was 7.5.

The day after admission the patient was placed in an oxygen tent at 10 a.m. At noon he received 8.1 mg. of morphine sulphate with marked relief of dyspnea. A phlebotomy of 250 cc. was done at 3 p.m. Another 8.1 mg. of morphine sulphate administered at 5 p.m. At 8 p.m. the patient could not be aroused, and during the night respirations fell to 2 per minute,

with pulse and blood pressure not obtainable. The heart was regular, rate 72 per minute. Rales and rhonchi filled both lung fields, with dullness posteriorly, and the patient died early the next morning.

DISCUSSION BY CLINICIAN

Dr. Arthur Selzer*: Before discussing the case I should like to make a few comments on the electrocardiogram and the chest roentgenogram of this patient, which I was permitted to review ahead of this presentation. The electrocardiograms show right axis deviation, which later became more prominent, a depression of the RS-T segments with inverted T-waves in leads 2 and 3, which is interpreted as indicative of right ventricular hypertrophy. Also noticeable are the tall P-waves, particularly in lead 2, which in my opinion may have an important bearing upon the diagnosis. The x-ray films show a normal sized cardiac shadow with a prominent pulmonary artery and heavy hilar shadows. I am impressed by the evidence of marked pulmonary emphysema, which is of great importance in the interpretation of this case. Roentgen-kymographs are shown to prove that cardiac pulsations are normal—specifically, that there are no areas of absent or reversed cardiac pulsation.

It is well to point out that more than a year has elapsed between the time the last electrocardiogram and chest roentgenogram were taken and the patient's death. We wish we had had more recent tests performed, for a new factor may have appeared in the last year of the patient's life and contributed to his death about which we have no information without recent x-rays and electrocardiograms.

The diagnostic problem presented here is a case of a middle-aged man who had cardiac and pulmonary symptoms, and who died amidst signs and symptoms of heart failure with evidence of predominant involvement of the right side of the heart, but without definite cardiac enlargement.

Considering the four common types of heart disease, we can eliminate hypertensive and luetic heart disease. It is true that normal blood pressure readings may occasionally be found in hypertensive patients during cardiac failure, but this patient has been under observation for a long time, and if he was a hypertensive, higher readings of his blood pressure would have been found at one time or another. In addition, no other findings support the diagnosis of hypertension. Lues, in its common form, affects the heart by causing aortic insufficiency, or by obstructing the coronary ostia and leading to anginal attacks. Neither was present in this case.

The diagnosis of rheumatic heart disease should be entertained here more seriously, because mitral stenosis is the commonest cause of right heart hypertrophy and failure. In mitral stenosis the characteristic diastolic murmur may be absent or overlooked, although this is seldom the case in patients observed for long periods of time, with and without cardiac failure. Against mitral stenosis in this case is the absence of cardiac enlargement, particularly that of the left auricle, the absence of auricular fibrillation, and the shape of the P-wave in the electrocardiogram, which was tall and pointed, rather than bifid, as is usually the case in mitral stenosis.

Coronary heart disease should be considered in any unexplained case of cardiac failure even in the absence of cardiac pain, for atypical, painless forms of coronary disease are not uncommon. Coronary heart disease is one of the very few conditions in which the heart may fail without marked cardiac enlargement, as has happened in this case. Also right axis deviation is commonly seen in coronary disease, either in the form of true right ventricular hypertrophy, or as a residual change from an anterior myocardial infarction (QS-wave in lead 1). There is, however, nothing in this protocol to support the diagnosis of coronary heart disease, which does not seem to me very likely even though I cannot rule it out with certainty.

Considering rarer forms of heart disease, congenital cardiac malformation should be considered in cases showing right ventricular hypertrophy. Of the few lesions compatible with survival to adulthood two come to my mind in connection with this case: (1) pulmonary stenosis with intact interventricular septum, and (2) interauricular septal defect. In the first case the x-ray appearance of the cardiac shadow is not unlike the one we saw in this case. Prominent pulmonary artery shadow is often seen, which is due to a poststenotic dilatation of the artery. Right axis deviation, too, belongs to the picture of pulmonary stenosis, with tall, prominent P-waves, as was found in this case. Yet, it is difficult to reconcile this diagnosis with the absence of a loud systolic murmur. Therefore I shall dismiss this diagnosis. An interauricular septal defect may be present without cardiac murmurs, but the absence of generalized cardiac enlargement and of wide, pulsating hilar shadows speaks against it.

In the absence of a febrile course and cardiac murmurs we do not have to entertain the diagnosis of acute or subacute bacterial endocarditis.

We have to mention in the group of diseases affecting primarily the myocardium, which in its chronic form includes so-called Fiedler's myocarditis, beriberi heart and cardiac amyloidosis. These diseases are very rare, but they should be taken into consideration in patients with chronic heart failure in whom more common causes of failure have been excluded. However, they run usually a course of progressive cardiac insufficiency, which does not as a rule extend as long as this case. They are associated with marked cardiac enlargement, and usually present bizarre and unspecific electrocardiographic patterns, so that it would not be likely to find in them typical right ventricular preponderance. Our case, then, does not fit in this group.

Finally, we come to the discussion of the group of conditions known as "cor pulmonale," or pulmonary hypertension. The existence of hypertension of the lesser circulation has been suspected for a long time, but only within the last year or two did we acquire

* Assistant Clinical Professor of Medicine.

definite proof of it by direct measurements of the pulmonary arterial pressure. We know now that the systolic pressure in the pulmonary artery in normal individuals is about 25 mm. of mercury and the diastolic pressure about 8 mm. In pulmonary hypertension the systolic pressure may exceed 100 mm. The commonest causes of pulmonary hypertension are conditions affecting the left side of the heart, namely, left ventricular failure and mitral stenosis. However, by cor pulmonale we mean primary disease of the pulmonary circulation, or primary hypertension of the lesser circulation. We have known for a long time that pulmonary vascular sclerosis, which is the pathological substrate for pulmonary hypertension is most often associated with pulmonary emphysema, pulmonary fibrosis, chronic interstitial pneumonia, pneumokoniosis, chest deformities, and, perhaps, pleural adhesions.

There is a small group of cases where pulmonary vascular sclerosis appears prominently without any demonstrable pulmonary disease, and these have been called "primary pulmonary vascular sclerosis"; but according to Brill only 20 reliably documented cases of this disease have been reported in the literature.

The causal relationship between emphysema and pulmonary hypertension is not clear. Considering the enormous reserve of the pulmonary vascular bed, only 15 to 20 per cent of which is occupied at any time, it is very doubtful whether the reduction of the capillary bed which occurs in emphysema can ever be sufficiently severe to cause pulmonary hypertension. We also have no adequate explanation for pulmonary hypertension in fibrosis of the lungs. Pulmonary hypertension associated with emphysema or fibrosis of the lungs is often accompanied by cyanosis. In some cases cyanosis and secondary polycythemia are very prominent, and these are occasionally referred to as "Ayerza's disease," although this does not signify a disease entity any more.

Returning to our case presentation, we have evidence of pulmonary emphysema and bronchitis. On first admission the patient had dyspnea, which may well have been pulmonary rather than cardiac. At that time signs of cardiac failure were rather mild. Throughout the course of the disease one can visualize the play of two factors: bronchitis and emphysema on one hand, and right sided cardiac insufficiency on the other hand. The broncho-pulmonary factor may even have outweighed the cardiac factor, for up to the terminal admission edema and increased venous pressure were not very prominent. When we add to this the absence of marked cardiac enlargement, the evidence of right ventricular hypertrophy and the tall P-waves in the electrocardiogram, the prominent pulmonary arterial shadow and the heavy hilar shadow in the x-ray—all features frequently seen in cor pulmonale—then it becomes apparent that the best diagnosis in this case is cor pulmonale, or pulmonary hypertension associated with chronic pulmonary emphysema and bronchitis, leading to right ventricular hypertrophy, strain and failure.

Dr. Alvin J. Cox, Jr.*: The heart in this case weighed only 350 grams. This is not a striking degree of enlargement, and no enlargement at all was present on the left side. As Doctor Selzer suspected, however, the ventricular muscle on the right side was strikingly thickened. Its thickness was nearly 1 cm. in some places, and as the ventricular chamber was considerably dilated, this thick muscle represented a marked hypertrophy of the right ventricle. The pulmonary valve orifice was 8.5 cm. in circumference, which is distinctly enlarged, and the branches of the pulmonary artery were also larger than normal. Many of the intrapulmonary branches of the artery also showed scattered atheromatous patches, which are additional evidence that there was prolonged pulmonary artery hypertension.

The lungs were voluminous and showed well developed emphysema throughout, although this was most marked in the upper lobes. This is an unusual degree of emphysema even for an older individual, and one is inclined to suspect that there was some relationship between this high degree of emphysema and the pulmonary arterial hypertension which led to hypertrophy of the right ventricle and, we believe, heart failure.

The evidence of heart failure was not as good as one might hope. There was little edema visible at autopsy, and there was no large accumulation of fluid in any of the body cavities. However, the liver, though not enlarged, showed a characteristic mottling of the cut surface indicating chronic hyperemia with atrophy of liver cells in the lobule centers. Similar patchy atrophy was present in the pancreas, where adjacent to the islands of Langerhans the cells of the pancreatic acini were considerably larger than they were at a distance from the islets. This type of focal atrophy of the pancreas is usually associated with heart failure, and I believe that the changes in the pancreas and in the liver indicate that this patient was in heart failure.

Microscopic study of the lungs showed that nearly all the small branches of the pulmonary artery had thickened walls with an increase in the number of layers of elastic tissue and fibrous thickening of the intima. This, however, does not necessarily represent the cause of the pulmonary hypertension. Similar vascular thickening occurs in cases of pulmonary hypertension when we know that the cause is beyond the lung, as in cases of mitral stenosis. It seems apparent that this kind of arterial change is a secondary phenomenon, and tells us little about the mechanism of the hypertension. This mechanism remains unknown. A role may have been played by abnormal communications with the bronchial artery which carries a higher arterial pressure, or possibly some other factors such as changes in the motility of the lungs may have been influential, but these possibilities cannot be evaluated in this case.

In summary, this was a case of pulmonary artery hypertension associated with pulmonary emphysema of a severe degree. There was hypertrophy of the heart limited to the right side—so-called cor pulmonale—and heart failure had ensued.

* Professor of Pathology.

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NOTICES AND REPORTS

Minutes of C.M.A. Executive Committee Meetings

Tentative Draft: Minutes of the 206th Meeting of the Executive Committee, San Francisco, January 13, 1948.

The meeting was called to order by Chairman Shipman at the Family Club at 11:30 a.m.

1. *Roll Call:*

Present were Doctors Shipman, Cline, Bruck, Garland (ex-officio) and Messrs. Whitaker and Hunton. Absent: Doctors Askey, Alesen and Wilbur (ex-officio.)

2. *California Centennial:*

Dr. Cline presented an invitation from Governor Warren for a C.M.A. representative to attend the California Youth Conference in Sacramento. It was regularly moved, seconded and voted that Dr. Frank A. MacDonald of Sacramento be asked to represent the Association on this occasion.

3. *A.M.A. Rural Health Conference:*

It was regularly moved, seconded and voted that Dr. Carroll B. Andrews, Chairman of the C.M.A. Committee on Rural Medical Service, be requested to attend a Chicago meeting of the A.M.A. Conference on Rural Medical Care on February 6 and 7, 1948, at which time Doctor Andrews plans to be in Chicago on other business.

4. *County Medical Society Election:*

Dr. Cline read a letter received from a member who complained that the election of officers in his county medical society had resulted in the assumption of office by individuals whose views were opposed to the expressed views of organized medicine; he believed that such an election should be construed as invalidating the charter of the county society. The Committee voted to place the matter on the agenda for the next Council meeting and to so notify the member.

5. *Rebates:*

There was considerable discussion of the situation regarding rebates, particularly in view of the newspaper publicity in Los Angeles and San Diego. It was moved, seconded and voted that the C.M.A. should take the following steps at this time:

1. Draft legislation for introduction in Sacramento to provide penalties for those found guilty of giving or receiving rebates.

2. Ask the Better Business Bureaus to exact pledges from their members that rebates would not be given or received.

3. Ask county medical societies to take disciplinary action against members guilty of rebate practices.

It was decided to invite legislative leaders to the next Council meeting to discuss this legislation.

(This entire action was made contingent on the approval of Doctors Askey and Alesen; this approval was given by telephone later in the day.)

Adjournment.

SIDNEY J. SHIPMAN, M.D., *Chairman*
L. HENRY GARLAND, M.D., *Secretary*

Tentative Draft: Minutes of the 207th Meeting of the Executive Committee, San Francisco, January 18, 1948.

The meeting was called to order by Chairman Shipman in the C.M.A. office at 10 a.m.

1. *Roll Call:*

Present were Doctors Shipman, Cline, Askey, Alesen, Bruck, Garland (ex-officio), Wilbur (ex-officio) and, by invitation for portion of the meeting, Dr. Glenn Cushman of San Francisco and Dr. Wilbur Bailey, C.M.A. Councilor, and for the entire meeting, Messrs. Hassard and Hunton.

2. *Association of Santa Fe Coast Line Physicians:*

Dr. Askey reported on several meetings held in Los Angeles between the C.M.A. Council's committee and representatives of the Association of Santa Fe Coast Lines Physicians. This Association has been recognized by the Santa Fe Hospital Association as bargaining agent for its physician members for purposes of the National Railway Labor Act and has expended funds for legal fees and transcripts preparatory to meetings with directors of the hospital before a federal railway mediator over requests of the physicians for adjustment of wages, working conditions and arbitration of grievances. The Association is in need of legal and financial assistance if it is to achieve the aims of its members and has requested C.M.A. officers to consider the propriety of giving such assistance.

Mr. Hassard, who met with officers of the Association of Santa Fe Coast Lines Physicians, discussed the legal situation and mentioned that litigation to determine the exact legal status of the physicians' group might be lengthy and costly.

Dr. Glenn Cushman, representing the Santa Fe physicians in the San Francisco Bay area, discussed the situation.

After full discussion it was regularly moved, seconded and voted that the moral force of the C.M.A. should be placed behind the physician members of this group, that legal and public relations counsel be instructed to give such assistance as is possible without the C.M.A. appearing officially in the case, and that legal counsel be authorized to employ assistant legal counsel for this case, if advisable.

3. *Date of Next Council Meeting:*

It was pointed out that the dates of February 28 and 29, 1948, set for the next Council meeting could not be used because of the lack of hotel facilities at that time. After discussion it was regularly moved, seconded and voted that the meeting be held in Los Angeles on February 21 and 22, 1948.

4. *Rebates:*

Discussion was held on publicity resulting from C.M.A. statements regarding rebates and it was pointed out that the Better Business Bureau of Los Angeles was anxious that legislation to prohibit rebates be introduced in the budget session of the Legislature in March, 1948, rather than awaiting the regular session in 1949. It was stated that the introduction of such legislation must follow proper legislative methods and not be forced on the Legislature as an emergency measure. It was also regularly moved, seconded and voted that the joint committee of the C.M.A. and the Board of Medical Examiners which is studying a complete rewriting of the Medical Practice Act be urged to seek inclusion in the revised act of a section setting forth that participation in rebating practices constitutes unprofessional conduct.

5. *Employee Pension Plan:*

Dr. Cline presented a new proposal made by an insurance agent for establishment of a pension plan for C.M.A. employees. He stated that this subject had been studied several years ago and dropped because of costs which were considered excessive. The new proposal provides a more modest plan at a considerably lower cost and he suggested that a new committee be named to study the matter. It was regularly moved, seconded and voted that such a committee be named, to consist of Dr. Donald Charnock as chairman, Dr. Cline and Dr. Alesen.

6. *Status of Non-Profit Hospitals:*

The Secretary reported that a recent ruling of the State Board of Equalization had resulted in some non-profit hospitals being removed from their tax-exempt status where they employed radiologists or pathologists on a basis of income higher than that paid similar physicians in state-owned hospitals. As a result of this ruling some hospitals have taken steps to cancel existing contracts with physicians on the ground their tax-exempt status may be endangered! It was regularly moved, seconded and voted that legal counsel give every assistance in this matter to the physicians whose status and working arrangements may be under question because of this ruling.

7. *Membership:*

On nomination by his county society, Dr. Earl R. McPheeters of Berkeley was elected to retired membership.

Sidney J. Shipman, M.D., *Chairman*
L. Henry Garland, M.D., *Secretary*

California Physicians' Service

Fish or Cut Bait

In a brochure published recently by the Bureau of Medical Economic Research of the American Medical Association, Frank G. Dickinson, Ph.D., Director of the Bureau, distributes the 1945 "medical" dollar as follows: Physicians, 27 cents; Hospitals, 16 cents; Dentists, 13 cents; Drugs, 23 cents; Other, 21 cents.

A footnote to his statistical study which merits special attention, defines the meaning of "*other*" as:

1. Student fees prepaying for medical care.
2. Accident and Health Insurance, net payments.
3. Mutual and Accident and Sick Benefit Associations, net payments.

In other words, various voluntary prepayment medical care agencies accounted for more than 20 per cent of every medical dollar spent in the year 1945. In 1946-1947, a period for which figures are not yet available, the proportion will be higher, for in these years the prepayment plans have had their greatest growth.

The reaction of the doctors to the well defined trend toward prepaid medical care is not uniform. Some welcome it. Some are apathetic toward it. Many deplore it. One writes as follows in the April, 1947, issue of *Medical Economics:*

"The great majority of doctors don't want prepaid medical care now any more than they wanted it a few years ago. Even fear of government control won't elicit their wholehearted cooperation in the voluntary movement. Though voluntary health insurance plans are forming throughout the U. S., I think most of them will be thrown into the discard in the near future. Most physicians don't want to practice medicine that way. They don't want to be regimented by the government or by anyone else.

Signed ————————, M.D., Washington."

Obviously the writer from Washington believes that the physician can, independently and without reference to factors other than his own wishes, define and freeze the pattern of his future practice. It is a temptation to suggest that economic factors and the wishes of his patients might have a considerable influence upon the ultimate definition of that design.

But the *reason* for the doctor's point of view (which, as he states, is shared by many) is more interesting than his prognosis of the future. Since the prepayment plans act only in a fiscal capacity for their members and do not intrude into or restrict either the patient-physician relationship or the treatment procedures involved, it is difficult to understand the use of the word "regimented" to define the real objection to them. Could the Washington doctor's real objection be to a possible reduction in fees chargeable if prepayment plans succeed in enrolling an ever larger membership among the people?

There is no reason why such an objection should not be stated openly—except perhaps, public reaction to it.

Nevertheless, if this is a real objection to the voluntary plans the physicians should do something to remove it. For if the voluntary plans fail the profession will have lost not only its one defense against governmental supervision, but it will have lost face as well. It is most unlikely that the public would forget that the voluntary plans were recommended by the profession itself as the best answer to the question of high cost medical care. With the American flair for pessimistic humor, the public can be expected to enjoy to the limit the spectacle of medicine's champion biting the dust—unhorsed by a burr under the saddle blanket.

However, even the certainty of ridicule would not justify the retention of the voluntary methods of prepayment, if the financial factor can be sustained as an objection to them. No one, least of all the American public, would deny the principle that the worker is worthy of his reward. No one would expect the doctor to serve without adequate compensation. The objective to be reached then is an agreement between the voluntary plans and the profession upon the limits of "adequate" compensation.

Such an agreement can be reached. But in view of the human and economic factors that will be the ultimate determinants, the resulting fees will be a compromise. They will not be as high as some physicians will wish. Neither will they be starvation wages. Their virtue will lie in the fact that they are a compromise reached by two parties in acknowledgment of factors beyond the control of either or both.

If the profession wishes to avoid the controls of government supervision it must set about reaching such an agreement at once. The voluntary plans cannot survive without the wholehearted support of their professional sponsors. Without agreement on fees that support will never be more than half-hearted.

It should be emphasized that there are not a half dozen alternatives to the voluntary plans. There is only one—a governmental plan. The public has declared its approval of and desire for prepaid medical care. If the profession cannot or will not supply it the government will be forced to do so, by public demand. There will be no return to "private" practice as we have known it.

The time has come to fish—or cut bait. If the profession is not interested in supporting its voluntary plans loyally and intelligently, then it should drop them—and stand by for government orders.

In Memoriam

Bayley, Walter A. Died in Sawtelle, January 4, 1948, age 67, of virus pneumonia, secondary infection. Graduate of the University of Southern California School of Medicine, Los Angeles, 1905. Licensed in California in 1905. Doctor Bayley was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

✤

Coggin, Charles Benjamin. Died in Berkeley, January 10, 1948, age 40, following an emergency operation. Graduate of the College of Medical Evangelists, Loma Linda-Los Angeles, 1935. Licensed in California in 1935. Doctor Coggin was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

✤

Graves, John Henry. Died in San Francisco, January 9, 1948, age 80. Graduate of the Cooper Medical College, San Francisco, 1896. Licensed in California in 1897. Doctor Graves was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

✤

Henderson, Joseph Jefferson. Died in San Francisco, January 9, 1948, age 77. Graduate of the University of Michigan Medical School, Ann Arbor, 1891. Licensed in California in 1892. Doctor Henderson was a retired member of the San Francisco County Medical Society, and the California Medical Association.

✤

Johnson, Clark Moore. Died in San Francisco, January 18, 1948, age 49, of heart disease. Graduate of the University of California Medical School, Berkeley-San Francisco, 1924. Licensed in California in 1924. Doctor Johnson was a member of the San Francisco County Medical Society, the

California Medical Association, and a Fellow of the American Medical Association.

✤

PROBERT, WILLIAM HENRY. Died in Berkeley, January 12, 1948, age 54, of a heart attack. Graduate of the Washington University School of Medicine, St. Louis, Missouri, 1921. Licensed in California in 1932. Doctor Probert was a member of the Alameda County Medical Association, the California Medical Association, and the American Medical Association.

✤

ST. SURE, FRANK ADOLPH. Died in San Diego, January 24, 1948, age 64, of cerebral hemorrhage and hypertension. Graduate of Rush Medical College, Illinois, 1909. Licensed in California in 1925. Doctor St. Sure was a member of the San Diego County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

✤

SANSUM, WILLIAM DAVID. Died in Santa Barbara, January 6, 1948, age 67, after a stroke. Graduate of Rush Medical College, Illinois, 1915. Licensed in California in 1921. Doctor Sansum was a member of the Santa Barbara County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

✤

SIEVER, ABRAHAM JOSHUA. Died in Arcadia, December 5, 1947, age 46, following a long illness. Graduate of the Washington University School of Medicine, St. Louis, Missouri, 1934. Licensed in California in 1938. Doctor Siever was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

✤

SIMPSON, BRYANT ROBERT. Died in San Diego, January 23, 1948, age 60, of cancer of the lung. Graduate of the University of Nebraska College of Medicine, Omaha, 1910. Licensed in California in 1917. Doctor Simpson was a member of the San Diego County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

Percy Tilson Magan

Born in Ireland November 13, 1867, Percy Tilson Magan came to this country at the age of 17 years. Soon afterward he entered Battle Creek College in Michigan. After his graduation he became a professor in the college and later was made dean.

Engaged in an active academic life, Percy Magan and his close friend, E. A. Sutherland, developed a strong desire to establish self-supporting medical missionary work in the neglected South. The better to qualify for the project, both men sought medical education, which they received at Vanderbilt and at the University of Tennessee where Dr. Magan was graduated cum laude in 1914. Doctors Magan and Sutherland established a medical institution in connection with the school at Madison, Tennessee. In 1915, Dr. Magan joined the College of Medical Evangelists as dean, and in 1928 he was made president, a position in which he served until his retirement and election to the position of president emeritus in 1942.

Membership in many professional societies indicated his interest in the field of medicine. He was chairman, anatomy board, southern division Depart- of Public Health, California; trustee Medical Board of Los Angeles County General Hospital; Fellow American College of Physicians; member of the American Medical Association; Society American Bacteriologists; American Hospital Association; League for Conservation of Public Health; National Tuberculosis Association; American Cancer Foundation; California Medical Association (ex-vice-president); Southern California Medical Association; Los Angeles County Medical Association (trustee).

Dr. Magan died December 16, 1947, of a heart attack following a long illness.

NEWS and NOTES

NATIONAL • STATE • COUNTY

ALAMEDA

Dr. Wendell N. Stanley, Nobel Laureate in chemistry, who will join the faculty of the University of California next July as professor of biochemistry, recently was awarded the degree of Honoris Causa, one of France's highest scientific awards, at the University of Paris. Dr. Stanley, at present at the Rockefeller Institute for Medical Research at Princeton, N. J., is to direct biochemical research on the Berkeley and San Francisco Campuses of U. C.

* * *

Dr. Edwin H. Lennette. Alameda, who recently became the director of the Virus Laboratory, California Department of Public Health, has been appointed Lecturer in Public Health at the University of California, Berkeley.

FRESNO

Appointment of Dr. J. J. Bocian as full-time head of the pathological and clinical laboratories at Fresno Community Hospital has been announced by Dr. John D. Morgan, chairman of the board of trustees of the hospital. Dr. Bocian succeeds Dr. C. D. Newell who had been serving as pathologist on a part-time basis.

LOS ANGELES

Dr. Frederick Kellogg has been elected president of the Long Beach branch of the Los Angeles County Medical Association, Dr. Seibert Pearson, vice-president, and Dr. Milo Ellik, secretary-treasurer.

* * *

Dr. Lula Talbott Ellis, Dr. George Dock and Dr. George H. Kress have been made honorary members of the Los Angeles County Medical Association in recognition of their long service to the public welfare and the advancement of the practice of medicine.

* * *

Dr. James N. De Lamater, associate professor of medicine at the University of Southern California School of Medicine, has been appointed assistant dean. He succeeds Dr. Anson P. S. Hoyt, who although continuing as professor of bacteriology, will now also do research in the tuberculosis control division of the U. S. Public Health Service at Barlow Sanitorium.

ORANGE

Dr. Milo K. Tedstrom has been installed as president of the Orange County Medical Association for 1948, Dr. Thomas Rhone as vice-president, Dr. Llewellyn E. Wilson as secretary-treasurer, Dr. C. C. Violett as librarian. Dr. Lawrence Whitaker as editor of the bulletin, Dr. Edward A. Miller as associate editor and Drs. John Larson, Ardeth Wightman and Harry Huffman as counselors.

SAN FRANCISO

Permanente Health Plan recently announced signing of a contract for medical care of the 7,500 civilian workers at the Navy shipyard in San Francisco. Permanente provides medical care of workers at Mare Island, Alameda Naval Air Station, Treasure Island, and the Navy supply depot at Oakland.

* * *

Dr. Lindol R. French, assistant clinical professor of medicine, Stanford University, has been appointed to the State Board of Medical Examiners by Governor Earl Warren for a term ending January 15, 1952. He succeeds Dr. Anthony B. Diepenbrock of San Francisco.

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In recognition of research work on poliomyelitis, psittacosis, plague, tularemia and other diseases, the French Ministry of Public Health last month conferred the Order of Public Health upon Dr. Karl Meyer, director of the Hooper Foundation at the University of California Medical School.

* * *

The United States Navy recently awarded Dr. J. C. Geiger, San Francisco Director of Public Health, a certificate of appreciation for "exceptional and outstanding services rendered to the Medical Department of the Navy during the period of World War II." This was accompanied by a special citation from Rear Admiral J. P. Owen, District Medical Officer, 12th Naval District, for "meritorious services in the control of communicable diseases in the port of San Francisco."

SAN JOAQUIN

Dr. John T. Smiley has been appointed medical director of San Joaquin General Hospital to fill the position left vacant by the death of Dr. H. J. Bolinger late last year. Dr. Carl Meehan, who had been acting medical director since Dr. Bolinger's death, was named chief resident surgeon. Before his appointment to the San Joaquin County post, Dr. Smiley was chief of the Bureau of Hospital Inspection, California State Department of Public Health.

SANTA CLARA

Dr. David J. Stump, assistant professor of pathology at Columbia University, has been appointed pathologist at Santa Clara County Hospital. He replaces Dr. Houghton Gifford, who resigned in January.

* * *

Dr. William R. Duden, whose appointment as director of the Palo Alto Hospital has been announced by Dr. Loren R. Chandler, chairman of the hospital committee, took over his new duties February 22. Dr. Duden was formerly assistant superintendent of Peter Bent Brigham Hospital in Boston.

SANTA BARBARA

Increase in the rate of pay for resident physicians, at Santa Barbara General Hospital to $300 a month and maintenance, from $225 and maintenance, was announced recently by the County Board of Supervisors. Employment of two new residents also was reported by Dr. C. C. Hedges, the hospital's administrator. They are Dr. Louise F. Reda and Dr. Olga Siebert.

SHASTA-TRINITY

Dr. C. C. Gerrard has been installed as president of Shasta-Trinity County Medical Society for 1948, succeeding Dr. L. C. Moshier, Dr. Julius M. Kehoe continues as secretary of the Society.

SONOMA

In preparation for the scheduling of seminars on latest developments in medical knowledge which are to be held in California towns, Dr. Carroll B. Andrews, Director of Postgraduate Activities of the California Medical Association, recently made a one-week trip to Minnesota, Wisconsin, Michigan and Illinois to get information on operation of similar plans in those states. In Chicago, Dr. Andrews attended the third annual Conference on Rural Health, of which he is California state chairman.

GENERAL

Drs. Sam J. McClendon of San Diego, Harry E. Henderson of Santa Barbara and Elmer Belt of Los Angeles have been reappointed to the California State Board of Public Health by Governor Earl Warren. Dr. McClendon's appointment is for a term ending January 15, 1951, and the terms of Drs. Belt and Henderson end January 15, 1952.

* * *

General oral and pathology examinations (Part II) for all candidates will be conducted in Washington, D.C., by the American Board of Obstetrics and Gynecology from Sunday, May 16, through Saturday, May 22, 1948.

* * *

Under a new law, civilian doctors may become commissioned officers in the regular Navy, provided they meet the professional and physical qualifications. The law does away with the age limitation of 32 years and permits doctors in civilian practice to enter the Navy and be commissioned with the rank up to and including captain. Information may be obtained from the Bureau of Naval Personnel, via the Bureau of Medicine and Surgery, Navy Department, Washington, D.C.

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The American Board of Ophthalmology has scheduled Practical Examinations for 1948 in Baltimore, May 20-25, and in Chicago, October 6-9. Written qualifying tests will be held annually, probably in January of each year. Applicants for the January, 1949, written qualifying test must be filed before July 1, 1948, with the secretary, Dr. S. Judd Beach, Cape Cottage, Maine.

Osteopathic physicians now are authorized to provide out-patient treatment within certain limits to veterans with service-connected disabilities, Dr. Paul B. Magnuson, chief medical director of the Veterans Administration, announced recently. "Within the limits of practice of the healing art imposed by their respective state licenses, osteopathic physicians, when their services are requested by veterans, may be designed to provide out-patient treatment, on a fee basis, for service-connected disabilities under the same rules and regulations as govern such services by doctors of medicine," Dr. Magnuson said.

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The fourth Congress of the Pan-Pacific Surgical Association Conference will be held in Honolulu August 30 to September 13, 1948, with headquarters at the Royal Hawaiian Hotel, according to announcement by Dr. Forrest J. Pinkerton, secretary of the association.

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Declaring that there is no reason to defend "nefarious practices" of "people who got into our profession by hook or crook," Dr. Paul Magnuson, Veterans Administration medical director, announced recently that he was turning over to the American Medical Association a list of private physicians suspected of overcharging or of unfair practices in treating war veterans. He said the list was not long and consisted entirely of doctors treating out-patient veterans, but that he was asking the A.M.A. to take action.

* * *

Establishment of a number of teaching and research fellowships in the field of tuberculosis by the National Tuberculosis Association has been announced by Dr. Esmond R. Long, director of the NTA's Division of Research. The action was recommended by the executive committee of the American Trudeau Society. Annual stipends for the fellowships will range from $2,400 to $3,200 and provision will be made for laboratory fees and other incidental expenses. Applications for fellowships will be considered in the fields of pathology and bacteriology, clinical medicine, epidemiology and social and statistical research. Further information may be obtained from Dr. James E. Perkins, managing director, National Tuberculosis Association, 1790 Broadway, New York.

* * *

The area meeting of the American Academy of Pediatrics will be held at the Olympic Hotel, Seattle, September 13-15, 1948. Registration may either be made ahead of time by writing to Dr. C. G. Grulee, American Academy of Pediatrics, 636 Church Street, Evanston, Illinois, and enclosing a check for $10, or arranged for at the time of the meeting.

INFORMATION

Tissue Diagnosis Division in California Department of Health Held Unnecessary

The following resolution was adopted by the California Society of Pathologists at a meeting in December:

WHEREAS, THE PRACTICE OF PATHOLOGY, INCLUDING THE DIAGNOSIS OF TISSUES, IS THE PRACTICE OF MEDICINE AND HAS BEEN SO DESIGNATED BY THE HOUSE OF DELEGATES OF THE CALIFORNIA MEDICAL ASSOCIATION AND THE AMERICAN MEDICAL ASSOCIATION, AND

WHEREAS, PATHOLOGISTS HAVE ALWAYS SERVED PATIENTS, IRRESPECTIVE OF THEIR FINANCIAL STATUS, AS DO OTHER PHYSICIANS, AND,

WHEREAS, THE MEMBERS OF THE CALIFORNIA SOCIETY OF PATHOLOGISTS SEE NO NEED FOR ESTABLISHING A DIVISION FOR TISSUE DIAGNOSIS IN THE CALIFORNIA DEPARTMENT OF HEALTH, BE IT THEREFORE

RESOLVED, THAT THE CALIFORNIA SOCIETY OF PATHOLOGISTS PLEDGE ITS MEMBERS TO CONTINUE FREE TISSUE DIAGNOSIS IN THE CARE OF INDIGENT PATIENTS NOT CARED FOR BY PUBLIC AGENCIES IN THE VARIOUS TOWNS, CITIES AND COUNTIES OF THE STATE ON THE SAME BASIS AS DOES THE REFERRING PHYSICIAN, AND BE IT

FURTHER RESOLVED, THAT THE BOARD OF HEALTH OF THE STATE OF CALIFORNIA BE NOTIFIED OF THIS ACTION.

BOOK REVIEWS

A History of the Alameda County Medical Association

Physicians of Alameda County have several reasons for just pride in the book, "A History of the Alameda County Medical Association."

Pride in the story of the association itself. Only 14 years younger than the A.M.A., it is one of the oldest associations on the Pacific Coast. From a humble beginning it has grown into a most dynamic organization. The story of this growth is covered completely and thoroughly.

Pride in the author, Milton Henry Shutes, who has given freely of his time, from a busy otolaryngologic practice, not only to prepare this present volume but also to have written splendid books and articles on Lincoln and to edit the monthly Bulletin of the Alameda County Medical Association.

Pride in our former colleague, Frank R. Makinson, whose hobby consisted in collecting information concerning the early days of medicine in Alameda County and whose collection laid the groundwork for Dr. Shutes' effort; and lastly, pride in Dr. Makinson's widow, Alice, whose financial generosity made possible the publication of this work.

H. J. T.

A HISTORY OF THE ALAMEDA COUNTY MEDICAL ASSOCIATION. By Milton Henry Shutes, M.D. Published by the Alameda County Medical Association through the generosity of Mrs. Frank H. Makenson, 1947.

This very interesting volume is an amplification and extension of the researches and writings of Frank H. Makenson whose original book appeared in 1931.

It gives the history of the Society with the minutes, constitution and personnel of the successive organizations. There are brief sketches of many of the prominent individuals which are very interesting. Not less interesting is the contemporary medical organization history. The origin and history of the hospitals is a valuable record.

The many references with which the writer of this note is familiar are accurate and historically valuable. The volume will be interesting and valuable to all members of the medical profession who are acquainted with Alameda County and will prove interesting to all laymen for its store of local history.

The example set by Milton Henry Shutes should be followed in behalf of all county medical societies.

* * *

LABORATORY MANUAL OF MICROBIOLOGY FOR NURSES. By Gill and Culbertson. G. P. Putnams.

This manual has been carefully designed for use in a laboratory course in bacteriology for nurses. An excellent selection of experiments is included. It may be highly recommended for the specific purpose for which it was prepared. The book is much too elementary for use in the teaching of courses of microbiology for any other groups of students at the university level.

1947 YEAR BOOK OF GENERAL MEDICINE. By George F. Dick, M.D., J. Burns Amberson, M.D., George R. Minot, M.D.—(Edinburgh and London), William B. Castle, M.D., William D. Stroud, M.D., and George B. Eusterman, M.D. The Year Book Publishers, Inc., Chicago. Price $3.75.

1947 YEAR BOOK OF GENERAL THERAPEUTICS. Edited by Oscar W. Bethea, M.D., Professor of Clinical Medicine, Tulane University School of Medicine. Published by the Year Book Publishers, Inc., 304 S. Dearborn St., Chicago, Ill. Price $3.75.

These two books are valuable to the busy practitioner who has not the time—or often the inclination—to keep up with the all too voluminous literature of the all too many medical journals which are published today. They summarize and attempt to interpret the articles considered most significant by the editors in their respective fields.

The practitioner may find in them information or the clue to information he desires in the diagnosis or treatment of a difficult case. The practitioner or the teacher of medicine may also use them as sources to begin the more complete investigation of a problem in which he is interested.

For the quiz-minded individual the publishers thoughtfully have provided a list of 20 questions on the cover of each book.

If one but subscribes to the Yearbook of General Therapeutics one can toss into the trash basket faster the various throwaways of the pharmaceutical companies which would teach the practicing physician his postgraduate therapeutics to the benefit of the company's products. The therapeutic advances of 1947 are well summarized and evaluated by Dr. Oscar W. Bethea, formerly professor of Clinical Medicine at Tulane.

* * *

THE HUMAN RACE. By Emil Froeschels, Philosophical Library, New York. Price $3.00.

This small volume which presents some of the writer's philosophical concepts may be of interest to the student of philosophy. However, I am sure that the physician seeking instruction in this field can search elsewhere with greater promise of reward.

* * *

THE PRINCIPLES AND PRACTICE OF MEDICINE. By Henry A. Christian, A.M., M.D., LL.D., (Hon.) Sc.D., Hon. F.R.C.P. (Can.), F.A.C.P. Originally written by William Osler, M.D., F.R.C.P. Sixteenth Edition. D. Appleton-Century Company, Inc., New York.

This is the 16th edition of Osler's Principles and Practice of Medicine now written by Dr. Henry A. Christian. This book, in its more than 50 years of publication, has probably influenced medical thought in the United States more than any other single volume. It will probably continue to be of great influence. The present author has diligently revised the text every few years to keep up with the advances in medicine. At the same time he has attempted to retain as much as possible of the early editions. This blending results in a somewhat incongruous mixture of the old and the new.

On the new side are such innovations as the introductory history of modern medicine (by Dr. J. G. Carr) which uses the various editions of the Osler to show the developments of the period. Functional diseases of the nervous system are brought from their former location as a rear-end appendage of organic diseases of the nervous system and placed at the front of the book for every student to observe. There is a short bibliography at the end of each section in order that the reader may have ready access to original work.

On the old side are such retentions as that of "passive congestion" in diseases of the liver with the recommendation that "dry cups over the liver may be used."

The amount of hibliography at the end of different subjects is distinctly uneven. The reference space for poliomyelitis (six pages of text) is twice as large as that for tuberculosis (80 pages of text). In infectious diseases the references are given at the end of each individual entity. This is likewise true for diseases of the heart and those of the blood. On the other hand, in gastrointestinal diseases the references appear only at the end of a large section, and in renal diseases they are all lumped together. The use of Oxford Medicine as a reference text is almost too uniform. There are occasional wrong references in the index, such as the referral of emphysema in high altitude flying to page 517 instead of 545 (23); and mistakes in the text, such as the dietary prescription of 200 gm. fat, 40 of protein and 400 of carbohydrate for a high protein diet. There is spasmodic use of a telegraphic style in grammar, particularly marked in the omission of some articles when others are retained. All of this suggests hurried writing.

The book has two undesirable physical characteristics which should be mentioned. It has become so bulky that it is not easily manageable. The paper appears of such poor quality that the print is not easily read. For these the publisher should be chided.

In general, the descriptions of disease are succinct, the information on diagnosis and treatment up to date. One can still go to the Osler and find much which is missing in more wordy volumes. It can still be highly recommended.

* * *

AMIABLE AUTOCRAT—A Biography of Dr. Oliver Wendell Holmes. By Eleanor M. Tilton. Henry Schuman. Price $5.00.

The qualities which enter into good biographical writing are not always easy to define. Skill in use of the language goes of course without saying. The author must have an intimate acquaintance with the subject of his memoir, as well as with the time and place of the subject's activities. He must not fall into the distemper of which Macaulay accused Boswell. And if the general reader is to approve his work he should shun the pseudo-learned metaphysical approach, so much in vogue today, an approach which Holmes himself would surely have ridiculed. Miss Tilton can certainly not be charged with any of these failings. On the contrary, she has achieved, we believe, a biography of the first rank. Her book is a serious study but it contains just that touch of lightness which seems imperative in dealing with the Amiable Autocrat who was ever poised for flight above the heavy and the dull.

Holmes scientist and Holmes poet and writer are skillfully blended in Miss Tilton's analysis of this intriguing personality, the outstanding quality of whose mind was to process the stimuli of every sort which impinged on it and to send them scintillating forth in terms of his simple humanistic philosophy. One must be convinced from this study that Holmes, if not great, was a very good man; he exercised for years an almost unique influence not only in medicine but in literature and civic affairs, an influence which spread far beyond his local environment. Whatever his rank as a poet, he was far superior to the general run of Nineteenth Century essayist-versifiers. As a matter of fact, Dryden and Pope are at many points equalled, if not surpassed by the New England philosopher and wit who adopted so skillfully the Augustan couplet. One thinks, too, that the Doctor must have had much in common with another medical poet, almost his contemporary—George Crabbe.

Miss Tilton brings all this out; at the same time she does not work in a vacuum. A very real picture of late colonial Cambridge and Boston opens the book, and one constantly feels that through the eyes of the Autocrat one can see the scene shift down the long years of the Nineteenth Century. Harvard College and medical school, Holmes' training in Paris in the 1830's, his teaching and practice, his prodigious activity as a popular lecturer, his fight against the quacks, his philosophical novels and essays for the Atlantic, his rise to general eminence, and finally the triumph of becoming a legendary figure during one's own lifetime—all are passed in review. The medical side of the picture is done with remarkable "savoir de métier" and one wonders where Miss Tilton acquired her obvious familiarity with the laboratory as well as the consulting room. Doctor and layman can equally enjoy this book, and the author is to be thanked for a delightful and noteworthy contribution.

* * *

RECENT ADVANCES IN ENDOCRINOLOGY. By A. T. Cameron, C.M.G., M.A., D.Sc. (Edin.), F.R.I.C., F.R.S.C., Professor of Biochemistry, Faculty of Medicine University of Manitoba. The Blakiston Company.

The sixth edition of this valuable book on Endocrinology has now appeared. It remains as one of the outstanding compendiums available for the concise presentation of facts concerning physiology of the glands of internal secretion, and of present concepts concerning their various diseases.

As before, the small book is packed full of well documented and easily understood information. The old form has been preserved. Each of the glands is considered in turn, with considerable space being devoted to glandular physiology and biochemistry. The various diseases are then described, the physiology correlated, and the treatment outlined. An excellent bibliography of key references is at the end of each chapter.

The title "Recent Advances" has been justified by inserts, new references, and some deletion of the old in every chapter of the book. The section on thiouracil treatment of hyperthyroidism is the most extensive addition. It is unfortunate that the present widespread use of the less toxic propylthiouracil was not emphasized, but considering the usual lag between writing, proof reading and eventual publication, it is not surprising. New data is also included on radioactive iodine studies in thyroid physiology and in treatment, present concepts in exophthalmos, renal type of hyperparathyroidism, alloxan diabetes mellitus, the steroid hormones, the alarm reaction, experimental nephrosclerosis, prognosis in Addison's disease, metabolism of the sex hormones, the male climacteric, endocrine tumor of the gonads, carcinoma of the prostate, preparation and effects of the growth hormone and adrenocorticotropic hormone, testosterone therapy in Simmonds' disease, and presumptive hormones of the gastrointestinal tract. Turner's syndrome with dwarfism is listed under pituitary hypofunction—apparently the association with ovarian aplasia and high gonadotropin excretion was not noted in time for reclassification.

The author is a professor of biochemistry and understandably tends to emphasize fundamental physiology and biochemistry, while occasionally not giving much in detail concerning therapeutic management of the various diseases. However, fundamentals are so important in the proper understanding and management of endocrine disease, that this would seem actually to be an advantage. It has helped to keep the volume small.

This text seems at present to be the most valuable one available on this subject, and is recommended for inclusion in the library of everyone who is interested in Endocrinology, or who treats patients with endocrine diseases.

* * *

PHARMACOLOGY THERAPEUTICS AND PRESCRIPTION WRITING. By Walter Arthur Bastedo, Fifth Edition. W. B. Saunders Company, 1947.

The fifth edition of Bastedo's book is practically a new volume, as it has been completely rewritten because of many

advances in pharmacology and therapeutics. The author's guide throughout is the need of the practicing physician who uses drugs in treating sick patients, a viewpoint which is creditably maintained throughout the text without oversight of fundamentals. The book is divided into three parts.

Part I (43 pages) considers general aspects of pharmacology with a page of sage comments on the value of animal experimentation not only to pharmacology and other medical sciences but to animals themselves and human beings. He states it is the responsibility of the medical profession to educate the lay public about this matter.

Part II, the bulk of the text (732 pages), discusses the individual remedies in all essential details of pharmacological actions and therapeutic uses including the author's results in practice. New remedies considered are amino acids, blood fractions, heparin, dicumarol, curare, analeptics, antihistamines, anticonvulsants, folic acid, rutin, thiouracil and propylthiouracil, sulfonamides, penicillin, streptomycin, demerol, metopon, digitalis glycosides, antimalarials, mercurial diuretics, radioactive iodine, BAL (dithiopropanol; dimercaptopropanol) in arsenic, gold and mercury poisoning. BAL is claimed to be so efficacious in mercury poisoning that it may supplant other treatments. Poisoning from drugs and its treatment is well handled throughout. There is a brief summary of cholinergic and adrenergic effects and antagonists of autonomic drugs. The use of digitalis for prevention of cardiac hypertrophy is approved, in agreement with Christian. There are many illustrations of pharmacodynamic phenomena and of clinical results, especially side-actions. Few other books credit American pharmacologists with their original contributions as does Bastedo's.

Somewhat in contrast to the exposition of modern materia medica is the occasional inclusion of archaic and irrational drugs which seems to be a carry-over from the old empiricism, and to reflect the author's interest in pharmacy. For instance, calomel, A.B.S. pills and a considerable number of old cathartics are discussed; monobromated camphor is mentioned as a nerve sedative and gelsemium for trifacial neuralgia; for seasickness a great variety of remedies is suggested. "Sun Cholera Drops" and "Squibb's Diarrhea Mixture" are stated to contain spirit of camphor but the reader will wonder why these antiquated polypharmacal mixtures are even mentioned. Fortunately these oddities are greatly outweighed by a considerable selection of well justified materia medica.

Part III (23 pages) discusses prescription writing and dispensing of drugs in a sensible, practical manner.

The fifth edition of Bastedo's book is a compendium of remedies which can be recommended to practicing physicians as informative, interesting, and profitable reading.

MEDICAL JURISPRUDENCE

PHYSICIANS—MALPRACTICE—STANDARD OF CARE AND SKILL

Peart, Baraty & Hassard, *San Francisco*

An action (80 A.C.A. 602) for malpractice was brought against a physician based upon the following facts: It was alleged that the defendant doctor negligently performed his services toward the plaintiff patient and that as a result thereof, a breech birth occurred during which it was alleged that the plaintiff patient suffered lacerations and tearing of the tissue, erosion of the cervix, infection of the uteral genital tract and a general impairment of her health.

Plaintiff, at the trial, testified that the defendant physician had not given her adequate personal attention during the pre-natal period and while she was giving birth to the child. The defendant physician testified that he had given her adequate care and attention and that approximately 3 per cent of the babies born are breech presentations. An expert in obstetrics was then called to the witness stand and he testified that in his opinion the defendant physician did not use the ordinary care and skill of a practicing physician in the locality in the light of practices existing at that time. However, on cross examination, this witness testified that approximately 3 per cent to 5 per cent of births are breech births and that there are at least two approved methods of practice which physicians can use in such circumstances, in one of which the attending physician does not have to attempt to turn the child. The other practice, employed by some physicians, is to turn the child by manipulation of the abdomen before the labor pains become severe. At the conclusion of the testimony, the trial court granted the motion of the defendant physician for a non suit.

The judgment of non suit was sustained by the District Court of Appeals which held that the defendant doctor, having chosen a recognized and approved method of practice, used the degree of skill and care of a practicing physician in that locality and, therefore, was not guilty of negligence. It was pointed out by the upper court that expert medical testimony was offered only on the point of whether the defendant doctor had selected and used a recognized and approved method of practice and that no expert testimony was offered on the point of whether the defendant physician had given to the patient adequate attention and treatment while she was in the hospital and, therefore, the District Court of Appeals felt that the defendant physician was not guity of negligence.

PROGRAM AND PRE-CONVENTION REPORTS

for the

CALIFORNIA MEDICAL ASSOCIATION

Seventy-seventh Annual Session

San Francisco, April 11-14, 1948

St. Francis Hotel

INDEX

	Page
Photographs of Officers	191
Photographs of Guest Speakers	192
Officers and Delegates	194
House of Delegates Agenda	196
Proposed Constitutional Amendments	197
Scientific Assemblies:	
General Meetings	199
Section on General Medicine	200
Section on General Surgery	202
Section on General Practice	203
Section on Anesthesiology	204
Section on Dermatology and Syphilology	205
Section on Eye, Ear, Nose and Throat	207
Section on Industrial Medicine and Surgery	208
Section on Neuropsychiatry	210
Section on Obstetrics and Gynecology	211
Section on Pathology and Bacteriology	212
Section on Pediatrics	214
Section on Public Health	215
Section on Radiology	216
Section on Urology	217
Index to Speakers	219
Chart of Meeting Times and Places	223
Woman's Auxiliary to C.M.A.	224

PRE-CONVENTION REPORTS

	Page
Reports of General Officers	230
Reports of District Councilors	238
Reports of Councilors-at-Large	240
Reports of Committees	241
Reports of County Medical Societies	247

Cancer Commission Pre-Convention Conferences, Page 221

HOTELS

PLENTY OF ROOMS AVAILABLE FOR THE C.M.A. 1948 ANNUAL SESSION

Plenty of hotel rooms are available for the 1948 Annual Session, to be held April 11 to April 14 in San Francisco. Headquarters will be at the St. Francis Hotel, where all available rooms will be reserved for Officers, Delegates, Councilors and Guest Speakers. Neighboring hotels offering first-class accommodations will provide ample space for members and guests attending the session.

Listed below are hotels within a radius of a few blocks from the headquarters, in which rooms are available. Reservations in any of these hotels (except the St. Francis) may be made by writing to the San Francisco Convention & Tourist Bureau, 101 Grove Street, San Francisco, where all arrangements will be made. In writing for hotel rooms, be sure to specify the number and names of those in your party, the type and rate of accommodations required and the arrival and departure dates. It is also advisable to specify a second choice among the hotels, so that suitable arrangements may be made if the hotel of your first choice has exhausted its quota of rooms for this meeting.

A deposit of $10 per person is required to hold all reservations. Be sure to include your check when requesting hotel space.

RATES—SAN FRANCISCO HOTELS

HOTEL	SINGLE	DOUBLE	TWIN	PARLOR SUITE
CLIFT Geary at Taylor	$5.00 to 10.00	$7.00 to 10.00	$8.00 to 12.00	$20.00 to 25.00
FAIRMONT 950 Mason	6.00 to 11.00	7.00 to 12.00	7.00 to 12.00	20.00 to 26.00
MARK HOPKINS 999 California	7.00 to 9.00	10.00 to 14.00	10.00 to 14.00	20.00-25.00 to 30.00
PALACE Market and New Mantgamery	5.00 up	8.00 to 11.00	9.00 to 12.00	18.00-22.00 to 35.00
*ST. FRANCIS Powell and Geary	5.00 to 10.00	7.00 to 12.00	8.00 to 14.00	18.00-20.00
SIR FRANCIS DRAKE Sutter and Powell	5.00 up	7.00 up	8.00 up	
BELLEVUE Geary and Taylor	4.00 to 5.00	6.00 to 7.00	7.00 to 8.00	12.00
CALIFORNIAN 450 Taylar	4.00	5.50	6.50 to 7.00	
CANTERBURY 750 Sutter	3.00 to 5.00	4.00 to 6.00	4.50 to 7.00	
STEWART 353 Geary	2.50	4.00	4.50	9.00

* Rooms availoble in the St. Francis Hotel have all been reserved far Officers, Delegates, Councilars and Guest Speokers. All those eligible under these classificatians hove been notified by the C.M.A. office. Please ovoid delay by not requesting raams in the St. Francis unless yau occupy ane af these pasitians.



JOHN W. CLINE
President of C.M.A.



E. VINCENT ASKEY
President-Elect



L. A. ALESEN
Speaker of the House of Delegates

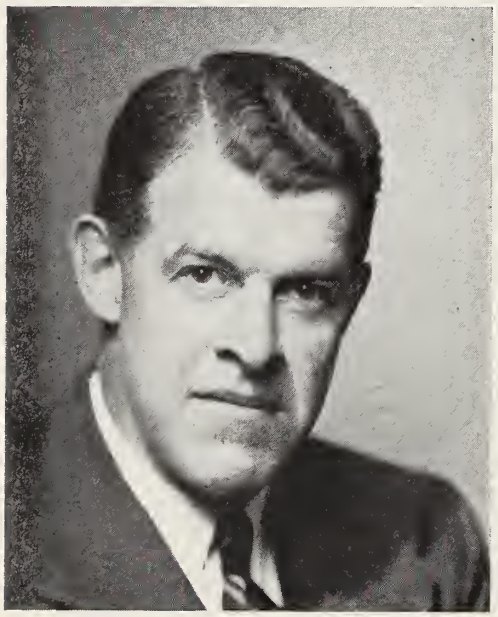
Guest Speakers



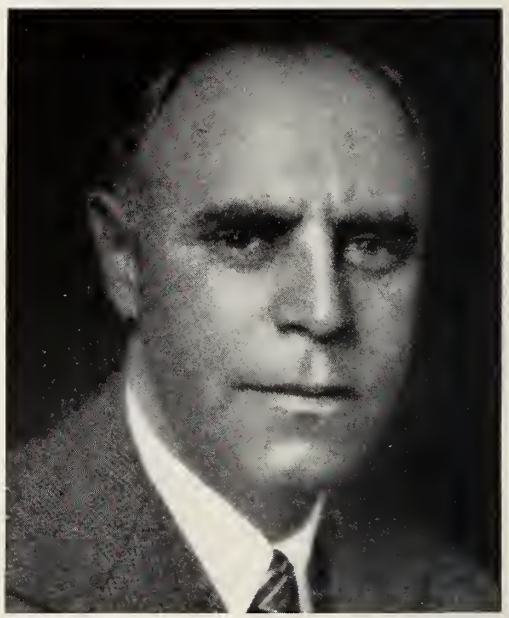
WESLEY BOURNE
Chairman, Department of Anesthesia
McGill University, Montreal, Canada



GEORGE F. LULL
Secretary, American Medical Association



RICHARD B. CATTELL
Surgeon, Lahey Clinic, Boston



HENRY E. MICHELSON
Professor of Dermatology and Syphilology
University of Minnesota Medical School

Guest Speakers



GEORGE W. THORN
Hersey Professor of the Theory and Practice of Physic, Harvard Medical School



J. WILLIAM HINTON
Associate Professor of Clinical Surgery Columbia Post-Graduate School, New York.

OFFICERS AND DELEGATES

General Officers

JOHN W. CLINE, San Francisco, President
E. VINCENT ASKEY, Los Angeles, President-Elect
L. A. ALESEN, Los Angeles, Speaker of House of Delegates
DONALD A. CHARNOCK, Los Angeles, Vice-Speaker of House of Delegates
EDWIN L. BRUCK, San Francisco, Chairman of Council
L. HENRY GARLAND, San Francisco, Secretary
DWIGHT L. WILBUR, San Francisco, Editor
JOHN HUNTON, San Francisco, Executive Secretary
PEART, BARATY & HASSARD, Legal Counsel

Members of House of Delegates—45th Annual Session

TOTAL DELEGATES (220)

DELEGATES EX OFFICIO (21)

John W. Cline, San Francisco—President
E. Vincent Askey, Los Angeles—President-Elect
L. A. Alesen, Los Angeles—Speaker of House of Delegates
Donald A. Charnock, Los Angeles—Vice-Speaker of House of Delegates
L. Henry Garland, San Francisco—Secretary-Treasurer
Dwight L. Wilbur, San Francisco—Editor
John D. Ball (1950)—Councilor 1st District
Jay J. Crane (1948)—Councilor 2nd District
Harry E. Henderson (1949)—Councilor 3rd District
Axcel E. Anderson (1950)—Councilor 4th District
R. Stanley Kneeshaw (1948)—Councilor 5th District
Edwin L. Bruck (1949)—Councilor 6th District
Donald D. Lum (1950)—Councilor 7th District
Frank A. MacDonald (1948)—Councilor 8th District
John W. Green (1949)—Councilor 9th District
Walter S. Cherry (1948)—Councilor-at-Large
H. Gordon MacLean (1948)—Councilor-at-Large
Eugene F. Hoffman (1948)—Councilor-at-Large
Sidney J. Shipman (1950)—Councilor-at-Large
Wilbur Bailey (1950)—Councilor-at-Large
C. V. Thompson (1949)—Councilor-at-Large

ELECTED DELEGATES (199)

Delegates	*Alternates*
Alameda County (14)	
Cyril J. Attwood	James R. Armstrong
John C. Bartlett	Clark J. Burnham
H. Chesley Bush	Wayne P. Chesbro
William G. Donald	James Frug
Grant Ellis	Elmo M. Grimmer
James B. Graeser	Chester F. Johnson
Ernest W. Henderson	W. J. Kennedy
Arthur J. Hunnicutt	Robert S. Peers
Ergo A. Majors	Harry E. Peters, Jr.
Paul P. Michael	P. R. Shumaker
James Raphael	F. R. Van de Carr
William W. Reich	
T. E. Reynolds	
Stanley R. Truman	
Butte-Glenn County (1)	
Hollis L. Carey	Lloyd R. Hennig
Contra Costa County (2)	
Kaho Daily	H. W. McNerney
L. H. Fraser	H. D. Neufeld
Fresno County (4)	
C. H. Covington	William L. Adams
Neil J. Dau	O. B. Doyle
V. G. Ghormley	Edward C. Halley
J. E. Young	C. S. Mitchell
Humboldt County (1)	
O. R. Myers	Max J. Goodman
Imperial County (1)	
George C. Holleran	F. Powers Heald
Inyo-Mono County (1)	
George D. Shultz	Walter Wilson
Kern County (2)	
Chester I. Mead	Carl Moore
Roderick Ogden	J. E. Vaughan
Kings County (1)	
Floyd E. Lees	Robert G. Moles
Lassen-Plumas-Modoc County (1)	
James D. Coulter	James W. Crever
Los Angeles County (81)	
S. M. Alter	Jack K. Afflerbaugh
Donald T. Babcock	Madeline J. Algee
Elmer J. Ball	E. W. Alsberge
Roger W. Barnes	Marden A. Alsberge
John V. Barrow	Elmer L. Anderson
Herbert C. Behrens	Arthur J. Annis
Elmer Belt	John W. Beeman
Terry C. Bennett	Daniel Beltz
John E. Bergmann	Samuel C. Benadom
Frederic K. Bergstrom	R. T. Bergman
Clarence J. Berne	Lewis P. Bolander
Paul C. Blaisdell	L. C. Burwell
Edwin F. Boyd, Sr.	John L. Caster
Kenneth C. Brandenburg	Victor Cefalu
James L. Bray	Charles H. Cowgill
H. B. Breitman	John W. Crossan
John A. Bullis	B. Franklin Davis
Richard O. Bullis	Kenneth S. Davis
George W. Caldwell	Karl L. Dieterle
Rafe C. Chaffin	Charles V. Emerson
A. C. Christensen	Frederic Ewens
Burt Thomas Church	Ralph A. Ferguson
Wells C. Cook	Ward L. Fisher
Clair P. Cosgrove	Alvin G. Foord
William E. Costolow	Garland F. Garrett
Frank G. Crandall, Jr.	Russel C. Hadley
Lawrence L. Craven	Donald Q. Heckel
Harri L. Davies	Wybren Hiemstra
G. R. Dunlevy	Etta C. Jeancon
Franklin Farman	E. R. Lambertson
Paul D. Foster	F. E. Leffingwell
Dorothy M. Franklin	Claude H. Linsley
Benjamin Frees	William E. Linton
Frederic J. Gaspard	Ivo J. Lopizich
Charles W. Gilfillan	Joseph Marco
Joseph Goldstein	S. S. Mathews
Frederick G. Gruber	Robert J. Moes
J. Severy Hibben	Oliver M. Moore
Lawrence M. Hill	James J. Morrow
Elizabeth Mason Hohl	George Nador
Ludwig L. Kaftan	James C. Negley
Julius Kahn	Charles F. Nelson
Arthur A. Kirchner	Roland C. Nelson
Herbert J. Kirchner	Jack Nichols
S. G. Kreinman	Edward F. Nippert
T. J. Laughlin	George E. Norwood
William H. Leake	J. Norman O'Neill

Delegates	*Alternates*
O. Dale Lloyd	Ross V. Parks
H. Clifford Loos	Bernard Pearson
J. Lafe Ludwig	Emmet A. Pearson
L. Duke Mahannah	Milton M. Portis
Ben D. Massey	Tracy O. Powell
Robert W. Meals	Erwin D. Pratt
Arthur J. Mendenhall	Frederick G. ReBell
William R. Molony, Sr.	James F. Regan
Carl L. Mulfinger	Paul A. Reichle
Clarence H. Nelson	Oscar Reiss
Alonzo J. Neufeld	Gordon L. Richardson
Merlin L. Newkirk	Joseph C. Risser
Frank W. Otto	Harry A. Roth
George F. Paap	Henry P. Rover
John Richard Paxton	John C. Ruddock
William F. Quinn	Edward S. Ruth
Louis J. Regan	Paul L. Saffo
E. T. Remmen	Emmett L. Schield
J. M. de los Reyes	Frederick C. Schlumberger
S. Gordon Ross	Hollis E. Sides
E. A. Royston	Harry A. Smith
Carl F. Rusche	Wilfred J. Snodgrass
J. P. Sampson	Erwin E. Stephens
Joseph C. Savage	Alfred H. Swan
Frank F. Schade	William A. Swim
Roy E. Shipley	Eldon W. Tice
Ralph T. Smith	Frederick M. Turnbull
William H. Snyder	Ewing L. Turner
R. W. Stellar	A. H. Weitkamp
Clinton H. Thienes	Walter Wessels
Robert A. Walker	John Wilbur Whitsett
Richard W. Walt	Louis F. X. Wilhelm
John F. Whalen	Daniel L. Woods
Warren A. Wilson	Frederick B. Zombro

Marin County (2)

Carl W. Clark	Ernest Denicke
Rafael G. Dufficy	L. L. Robinson

Mendocino-Lake County (1)

M. Clemens Beil	David B. Williams

Merced County (1)

Max Brannan	Edwin Soderstrom

Monterey County (2)

Howard E. Clark	William A. Carnazzo
A. L. Wessels	Keith Corp

Napa County (1)

Dwight H. Murray	Harry Baker

Orange County (4)

C. Glenn Curtis	Edward F. Bruning
Charles E. Irvin	John Davis
G. Wendell Olson	Ralph E. Hawes
Thomas Rhone	M. W. Hollingsworth

Placer-Nevada-Sierra County (1)

William M. Miller	C. E. Lewis

Riverside County (2)

Newman K. Bear	Elmer A. Hankins
Fred Clark	Walter Wood

Sacramento County (5)

Orrin Cook	Herbert Burden
Dave F. Dozier	E. R. Cole
Wayne E. Pollock	A. M. Henderson, Jr.
Frank Reardon	Frank W. Lee
Dudley Saeltzer	Ralph C. Teall

San Benito County (1)

Roswell L. Hull	E. N. Moore

San Bernardino County (4)

J. Needham Martin	Carl M. Hadley
Leonard M. Taylor	Walter F. Pritchard
E. L. Tisinger	J. J. H. Smith
Arthur E. Varden	Thomas I. Zirkle

San Diego County (9)

William C. Black	H. G. Holder
E. A. Blondin	John S. Martin
Morton N. Carlile	W. L. Martin
George D. Hiff	Alois E. Moore
Francis E. Jacobs	Thomas F. O'Connell, Jr.
Fraser L. Macpherson	J. G. Omelvena
R. J. Prentiss	E. M. Smith
Bryant R. Simpson*	J. T. Wells
Wesley S. Smith	F. E. West

* Deceased.

Delegates	*Alternates*

San Francisco County (25)

William L. Bender	Dorothy W. Atkinson
Walter D. Birnbaum	Charles E. H. Bates
William G. Burkhard	Lois H. Brock
Edmund Butler	Lawrence R. Custer
Jesse L. Carr	Lloyd B. Dickey
L. R. Chandler	Alexander F. Fraser
Chester L. Cooley	Henry L. Gardner
Martin W. Debenham	Frank L. A. Gerbode
G. Dan Delprat	Keene O. Haldeman
A. B. Diepenbrock	Berthel H. Henning
Frederick S. Foote	Ivan C. Heron
Henry Gibbons, III	Clyde D. Horner
Alson R. Kilgore	Charles W. Leach
Charles A. Noble, Jr.	Carleton Mathewson, Jr.
J. Marion Read	James J. McGinnis
Emmet L. Rixford	M. Laurence Montgomery
Francis Rochex	Clayton D. Mote
William L. Rogers	Thomas F. Mullen
Robert A. Scarborough	George B. Robson
Ralph E. Scovel	Wesley E. Scott
Daniel W. Sooy	Donald R. Smith
H. Brodie Stephens	Andrew B. Stockton
Robertson Ward	William A. Sumner
Helen B. Weyrauch	William W. Washburn
David A. Wood	A. Justin Williams

San Joaquin County (3)

J. Frank Doughty	C. A. Broaddus
Jack Eccleston	Ray Owens
Neill Johnson	George Wever

San Luis Obispo County (1)

H. N. Cookson	Robert O. Pearman

San Mateo County (3)

Carl Benninghoven	R. D. Borley
Stuart Lindsay	Logan Gray
A. G. Miller	Hartzell Ray

Santa Barbara County (3)

Harry C. De Vighne	H. V. Findlay
Douglas McDowell	Hugh Freidell
Alfred B. Wilcox	Delbert H. McNamara

Santa Clara County (6)

J. B. Josephson	Frederic W. Borden
Dell T. Lundquist	Burt Davis
Leslie B. Magoon	Charles A. Fernish
John Hunt Shephard	William Harder
Cletus Sullivan	Edward T. Liston
Donald R. Threlfall	John C. Wilson

Santa Cruz County (2)

P. K. Gilman, Jr.	Luther Newhall
Samuel B. Randall	Daniel D. Smith

Shasta County (1)

H. T. Hinman	Julius M. Kehoe

Siskiyou County (1)

James B. McGuire	C. C. Dickinson

Solano County (2)

H. Randall Madeley	C. C. Purviance
Felix R. Rossi, Jr.	Charles H. Widenmann

Sonoma County (2)

Carroll B. Andrews	D. C. Oakleaf
William N. Makaroff	Horace F. Sharrocks

Stanislaus County (1)

John Czatt	Paul Davis

Tehama County (1)

O. T. Wood	R. G. Frey

Tulare County (2)

Frank R. Guido	C. M. Mathias
W. A. Winn	F. L. Wiens

Ventura County (2)

A. A. Morrison	G. H. Arnold
G. K. Ridge	A. H. Stoll

Yolo County (1)

Earl H. Gray	Ray Nichols

Yuba-Sutter-Colusa County (1)

Stanley R. Parkinson	John Wesley Lindstrum

House of Delegates Meeting

1948 ANNUAL SESSION

(45th Annual Session)

The House of Delegates will meet in the Empire Room, on the second floor of the Hotel Sir Francis Drake, one block north of the Hotel St. Francis.

Speaker, L. A. ALESEN, *Los Angeles*
Vice-Speaker, DONALD CHARNOCK, *Los Angeles*
Secretary, L. HENRY GARLAND, *San Francisco*

AGENDA

FIRST MEETING

Sunday, April 11, 1948, at 6:30 p.m.

Order of Business

1. Call to order.
2. Report of Committee on Credentials, and Organization of the House of Delegates.
3. Roll call.
4. Announcement and approval of Reference Committees.
 (*a*) Committee on Credentials. (Delegates must register with the Committee.)
 (*b*) Reference Committee on the Reports of Officers and Standing Committees (Reference Committee No. 1). Note: Will consider also: Reports of County Society Secretaries.
 (*c*) Reference Committee on the Report of the Council and the Reports of the Secretary-Treasurer and Executive Secretary. (Reference Committee No. 2).
 (*d*) Reference Committee on Resolutions, Amendments to the Constitution and By-laws, and New and Miscellaneous Business. (Reference Committee No. 3.)
5. Address by President—John W. Cline.
6. Miscellaneous announcements by the speaker. (Stenographic service, to secure triplicate copies of resolutions, etc.)
7. Report of the Council—Edwin L. Bruck, Chairman.
8. Report of the Trustees of the California Medical Association—John W. Cline, President.
9. Report of the Auditing Committee—Sidney J. Shipman, Chairman.
10. Report of the Secretary—L. Henry Garland.
11. Report of the Executive Secretary—John Hunton.
12. Recess.—At 8 o'clock the House of Delegates will recess. Elected and ex-officio members of the House will then convene under the chairmanship of the President of the Board of Trustees of California Physicians' Service, to function with Board of Administrative Members of California Physicians' Service. With the adjournment of the meeting of C.P.S. Administrative members, the C.M.A. House of Delegates will convene, to act again as the House of Delegates of the California Medical Association.)

Meeting of Administrative Members of California Physicians' Service

1. Roll call.
2. Report of the President—Dr. Lowell S. Goin.
3. Report of the Secretary—Dr. Chester L. Cooley.
4. C.P.S. Administration Business Report, by the Executive Director—Mr. W. M. Bowman.
5. Appointment of Nominating Committee for Trustees and Administrative Members at Large.
6. Introduction of Resolutions.
7. Recess—for 24 hours. (Time of reconvening will be stated.)
8. Consideration of the Report of the Nominating Committee.
9. Consideration of resolutions.
10. New business.

13. Report of the Editor—Dwight L. Wilbur.
14. Reports of District Councilors.
15. Reports of Councilors-at-large.
16. Report of Legal Counsel—Peart, Baraty & Hassard.
17. Reports of Standing and Special Committees:
 A. Standing Committees:
 (a) Executive Committee—Sidney J. Shipman.
 (*b*) Committee on Associated Societies and Technical Groups—Peter Blong.
 (*c*) Committee on Audits—Sidney J. Shipman.
 (*d*) Committee on Health and Public Instruction—George M. Uhl.
 (*e*) Committee on History and Obituaries—Morton R. Gibbons, Sr.
 (*f*) Committee on Hospitals, Dispensaries, and Clinics—Carroll B. Andrews.
 (g) Committee on Industrial Practice — Donald Cass.
 (*h*) Committee on Medical Defense—Nelson Howard.
 (*i*) Committee on Medical Economics—H. Gordon MacLean.
 (*j*) Committee on Medical Education and Medical Institutions—B. O. Raulston.
 (*k*) Committee on Organization and Membership—Carl L. Mulfinger.
 (*l*) Committee on Postgraduate Activities—John C. Ruddock.
 (*m*) Committee on Publications—George W. Walker.
 (*n*) Committee on Public Policy and Legislation—Dwight H. Murray.
 (*o*) Committee on Scientific Work (Annual Session)—L. Henry Garland.
 (*p*) Cancer Commission—Lyell C. Kinney.
 (*q*) Editorial Board—Dwight L. Wilbur.
 B. Special Committees:
 (*a*) Delegates to the American Medical Association—John W. Cline.
 (*b*) Physicians' Benevolence Committee—Axcel E. Anderson.
 (*c*) Advisory Planning Committee—John Hunton.
 (*d*) Committee on Redistricting Councilor Districts—G. Dan Delprat.
 (*e*) Committee on Revision of Constitution and By-Laws—Sam J. McClendon.
18. Old and Unfinished Business.
 (*a*) Constitutional Amendments.
19. New Business.

SECOND MEETING

Tuesday, April 13, at 6:30 p.m.

Order of Business

1. Call to order.
2. Supplemental Report of Credentials Committee.
3. Roll call.
4. Secretary's announcement of Council's selection of place for the 1949 annual session.
5. Election of Officers:
 (*a*) *President-Elect.*
 (*b*) *Speaker.*
 (*c*) *Vice-Speaker.*
 (*d*) *District Councilors* (three-year term):*
 Second District—Jay J. Crane, Los Angeles (term expiring).
 Second District—Los Angeles County.
 Fifth District—R. Stanley Kneeshaw, San Jose (term expiring).
 Fifth District—Monterey, San Benito, San Mateo, Santa Clara and Santa Cruz Counties.
 Eighth District—Frank A. MacDonald, Sacramento (term expiring).
 Eighth District—Alpine, Amador, Butte, Colusa, Eldorado, Glenn, Lassen, Modoc, Nevada, Placer, Plumas, Sacramento, Shasta, Sierra, Sutter, Tehama, Yolo and Yuba Counties.
 (*e*) *Councilors-at-Large (three-year term):*
 (Note.—*Each vacancy among Councilors-at-Large, Delegates and Alternates is considered in turn. Each vacancy is voted on separately.)*
 Walter S. Cherry, Rialto (term expiring).
 H. Gordon MacLean, Oakland (term expiring).
 Eugene F. Hoffman, Los Angeles (unexpired term to expire in 1949. Incumbent holding office through Council appointment).
 (*f*) *Delegates to the American Medical Association:*
 Delegates are elected for two calendar years. At this session of the C.M.A. House of Delegates, terms of Delegates elected for calendar years 1949-1950 will expire on December 31, 1950.

* See footnote, page 197.

For terms: January 1, 1949-December 31, 1950
Incumbents

(*a*) H. Gordon MacLean, Oakland (term expiring).
(*b*) E. Vincent Askey, Los Angeles (term expiring).
(*c*) John W. Cline, San Francisco (term expiring).
(*d*) Donald Cass, Los Angeles (term expiring).
(*e*) Ralph B. Eusden, Long Beach (term expiring).

(*g*) *Alternates to the American Medical Association:*

(*a*) Leopold H. Fraser, Richmond (Alternate to H. Gordon MacLean).
(*b*) William Benbow Thompson, Los Angeles (Alternate to E. Vincent Askey).
(*c*) C. Kelly Canclo, San Jose (Alternate to John W. Cline).
(*d*) Alternate to Donald Cass—Carl L. Mulfinger incumbent through Council appointment.
(*e*) Elizabeth Mason-Hohl, Los Angeles (Alternate to Ralph B. Eusden).
(*f*) Alternate to John W. Green—Frank A. MacDonald incumbent through Council appointment.
(For term ending December 31, 1949.)

6. Announcement by Secretary.
Council's nominations of Members of Standing Committees. (For approval by the House of Delegates.)
7. Reports of Reference Committees:
(*a*) Report of Reference Committee Number 1, on "Reports of Officers and Standing Committees."
(*b*) Report of Reference Committee Number 2, on "Report of the Council, and Reports of Secretary-Treasurer, and Executive Secretary."
(*c*) Report of Reference Committee Number 3, on "Resolutions, Amendments to the Constitution and By-Laws, and New and Miscellaneous Business."
8. Adoption of budget for 1948-1949 fiscal year.
9. Setting of Association dues for calendar year 1949.
10. Unfinished Business.
11. New Business.
12. Presentation of Officers:
President
President-Elect
Speaker
Vice-Speaker
13. Presentation of Certificate to Retiring President—John W. Cline.
14. Approval of Minutes. (Committee to edit.)
15. Adjournment.

LEWIS A. ALESEN, *Speaker*
L. HENRY GARLAND, *Secretary*

* *Procedure of nomination of District Councilors is outlined in paragraph 3 of Article VII, Section 1, of C.M.A. constitution, adopted on May 8, 1940:*

The nine district Councilors shall be elected as follows:

Prior to the time set for election of district Councilors, the delegates of each Councilor district for which a councilorship is about to become vacant, shall submit in writing to the Secretary-Treasurer the names of one or more nominees to fill the said vacancy.

The Secretary-Treasurer shall transmit the names of such nominee or nominees so submitted to him to the House of Delegates on or before the time set for the election.

A vote shall be taken by the House of Delegates upon the nominee or nominees so submitted and, in the event that only one nominee has been submitted, the House of Delegates may, by a majority vote, either elect or refuse to elect said nominee.

If the House of Delegates shall reject the sole nominee of the delegates from the councilorship district concerned, then said delegates must immediately thereafter submit an additional nominee or nominees and the House shall proceed to vote thereon; if there is but one nominee, the House may elect or reject.

If, after such time as the Speaker may allow, delegates within such councilor district fail to submit an additional nominee or nominees, the House of Delegates may then proceed to make nominations from the floor of the House and a vote shall then be taken by the House of Delegates to determine who shall be elected to the vacant councilorship.

All nominees for district councilorships must be members in good standing, residing within the district in which the vacancy exists.

Proposed Amendments to C. M. A. Constitution

Second publication of six resolutions to amend the Constitution of the California Medical Association is made herewith. The resolutions were introduced in the House of Delegates at the 1947 annual meeting and are to be voted upon at the 1948 annual meeting.

Proposed constitutional amendment relative to annual assessment of dues

RESOLVED, That Section 1 of Article XI of the Constitution of this Association, California Medical Association, be and the same hereby is amended by adding to said section paragraph headings, by adding to said section a provision that the House of Delegates shall have power to reduce the annual per capita assessment of dues upon certain conditions, and by recasting said section to read as follows: "Section 1.—Annual Assessment of Dues—Other Sources of Funds—Appropriations.

"(a) Annual Dues: Funds shall be raised by equal annual per capita assessment of dues from the active and associate members, assessment of dues upon the associate members to be one-half of that upon the active members. The amount of the assessments shall be fixed by the House of Delegates by a majority vote of the members present and voting.

"(b) Waiver of Dues—War Service: Annual dues may be reduced or waived with respect to those members serving in the armed forces of the United States during the whole or any part of any year, and the Council may in its discretion refund in whole or in part from the funds of the Association dues paid in 1940 or in 1941 by or on behalf of active members if such members were at the time actually in the service of the armed forces of the United States.

"(c) Reduction of Dues—Special Cases: The House of Delegates, in fixing the amount of annual dues for any year, may at the same time provide for a reduction in annual dues for such year for those active members of the Association who, during the year, are ill or injured and wholly unable to engage in the practice of medicine or other gainful employment for a period of three or more consecutive months, or for those active members who engage in postgraduate work during the year, or for those active members who graduated from medical school less than five years prior to the first day of January in the year concerned. The House of Delegates, in providing for reduction of dues for any or all of the foregoing classes of active members, may designate the amount of the reduction and the procedure whereby such reduction may be obtained by an active member entitled thereto, or may delegate to the Council the power to fix the amount of the reduction and the procedure for obtaining same.

"(d) Other Sources of Funds—Special Assessments: Funds may also be raised by any of the following methods: I. publications of the Association; II. voluntary contributions; III. bequests, legacies, devises, and gifts; IV. special assessments levied by the House of Delegates; and V. in any other manner approved by the House of Delegates. In the event that the House of Delegates levies any special or other assessment other than the annual assessment of dues, it may, in the resolution levying the assessment, fix and determine the time within which such assessment must be paid, the class or classes of members of the Association upon whom it is levied, and the penalty, if any, including forfeiture or suspension of membership in this Association or the component county medical society, or both, to result from nonpayment thereof within the time prescribed.

"(e) Appropriations of Funds: Any resolution passed and adopted by the House of Delegates at any regular or special session thereof, which provides for or contemplates the appropriation or expenditures of the sum of more than $1,000, shall not be effective for any purpose unless and until ap-

proved by the Council. All appropriations, regardless of amount, approved and made by the Council, shall, if expended, be reported to the House of Delegates at its next annual session, and any unexpended portion of any thereof shall be included in the annual budget.

"(f) Physicians' Benevolence Fund: At least $1.00 out of the annual dues paid by each member of the Association shall be allocated to the Physicians' Benevolence Fund and shall only be used for purposes set forth in the By-Laws."

Proposed constitutional amendment relative to life membership

RESOLVED, That Section 1 (e) of Article IV of the Constitution of this Association, California Medical Association, be amended to read as follows: "(e) Life Members.

"Qualifications: Life members of the California Medical Association may be elected by the Council on the recommendation of any component county society from those active members thereof who (1) have been active members of this Association continuously for a period of twenty (20) years or more and are more than fifty (50) but less than sixty (60) years of age and have tendered to this Association a life membership fee of one hundred fifty dollars ($150.00) or such other sum as the House of Delegates may from time to time determine; or (2) have been active members of this Association continuously for twenty-five (25) years or more and are more than sixty (60) but less than sixty-five (65) years of age and have tendered to this Association a life membership fee of one hundred dollars ($100.00) or such other sum as the House of Delegates may from time to time determine; or (3) have been active members of this Association continuously for a period of twenty-five (25) years or more, are more than sixty-five (65) but less than seventy (70) years of age and have tendered to this Association a life membership fee of fifty dollars ($50.00) or such other sum as the House of Delegates may from time to time determine; or (4) have been active members of this Association continuously for twenty-five (25) years or more and are more than seventy (70) years of age. Those active members falling within Classification 4 need not be recommended by any component county society but are eligible to life membership on direct application to the Council. The Council may not elect to life membership any active member whose membership has not been continuous or who has ever been censured, suspended or expelled from the American Medical Association, this Association, any state medical association which is a constituent unit of the American Medical Association, or any county medical society which is a component part of this Association or a unit of any other state medical association.

"Obligations and Rights: Life members shall not pay dues and shall not be liable for assessments of any kind or nature. If active membership in good standing is maintained in his component county society, each life member shall have the right to vote, to hold office, and shall have all other rights and privileges of the Association. If active membership in his component county society is not maintained, the rights and privileges of a life member shall be those of a retired member."

Proposed constitutional amendment relative to rights of active members

Subdivision (a) of Section 1 of Article IV of the Constitution of this Association, California Medical Association, is hereby amended by adding to the end of the second paragraph of said subdivision (a) the following: "except that an active member who is gainfully employed or retained, whether compensated by a salary, commission, retainer or other method, by this Association or by any component county society or by any corporation, association or organization controlled by this Association or any component county society, may not hold office in this Association or be a member of the House of Delegates during such time as he is so gainfully employed or retained."

So that the second paragraph of said subdivision (a) of Section 1 of Article IV of the Constitution shall hereafter read as follows: "Rights: An active member shall have the right of suffrage and all other rights and privileges of the Association; except that an active member who is gainfully employed or retained, whether compensated by a salary, commission, retainer or other method, by this Association or by any component county society or by any corporation, association or organization controlled by this Association or any component county society, may not hold office in this Association or be a member of the House of Delegates during such time as he is so gainfully employed or retained."

Proposed amendment to the constitution relative to additional classes of membership

RESOLVED, That Article IV, Section 1 of the Constitution of this Association, California Medical Association, is hereby amended by adding a new subdivision to read as follows:

"(f) Additional Classes of Membership: The House of Delegates may, from time to time, establish special and limited classes of membership in this Association for internes, junior and senior residents, or house officers, practicing in hospitals in this state. In establishing such special membership for internes, junior and senior residents, or house officers, the House of Delegates may determine the qualifications, duration and privileges of such membership. Unless the House of Delegates determines to the contrary, such special members shall not pay dues. The House of Delegates may also from time to time provide for affiliation with the California Medical Association, on an affiliate basis, of undergraduate medical students attending medical schools in this state. Membership obtained under this subsection (f) shall not carry with it the right to vote or hold office."

Proposed amendment to the constitution relative to inactive members

RESOLVED, That section (f) be added to Article IV to read as follows: (f) Inactive Members: Qualifications—The Council may elect as inactive members, on recommendation of the component county societies concerned, any member in good standing who leaves his practice for a period of six or more months to engage in bona fide postgraduate study, or who leaves his practice by reason of protracted illness and for whom payment of dues would be a hardship. Obligations and Rights—Inactive members shall not pay dues and shall not have the right to vote or to hold office, or if holding an office during the period away from practice shall relinquish that office.

Proposed constitutional amendment relative to dues of members in the armed services

RESOLVED, That the Constitution of the California Medical Association shall be amended: By changing Article XI, Section 1, Paragraph 2, thereof, to read as follows: "Annual dues may be reduced or waived with respect to those members serving in the armed forces of the United States during the whole or any part of any year, and in respect to any member for any cause, upon the recommendation of the Council or Executive Board or body of the respective member's component county medical association or society, and"

SCIENTIFIC ASSEMBLIES

General Meetings

First General Meeting

Sunday, April 11, 10:00 A.M., Curran Theater

Chairman, John W. Cline, M.D., *President*

10:00—Address of Welcome—Robertson Ward, M.D., President, San Francisco County Medical Society.

10:05—Greetings from the Woman's Auxiliary—Mrs. Norman Morgan, President, Woman's Auxiliary to the California Medical Association.

10:15—Address of the President—John W. Cline, M.D., San Francisco.

10:25—What Is Being Done About the Ten Point Program—George F. Lull, M.D., Chicago, Illinois.

11:05—Carcinoma of the Rectum—Richard B. Cattell, M.D., Boston, Massachusetts.

11:35—End Result of Thorocolumbar Sympathectomy in Advanced Essential Hypertension—J. William Hinton, M.D., New York, N. Y.

A discussion of indications and contra-indications for operations in advanced cases of essential hypertension. This will be based on a review of approximately 500 patients operated upon during the past six years.

Second General Meeting

Tuesday, April 13, 9:00 A.M., Curran Theater

Chairman: George B. Robson, M.D., San Francisco
A. Morse Bowles, M.D., Santa Rosa.

9:00—The Pathogenesis of Cardiac Edema—Eaton MacKay, M.D., La Jolla.

Correlation of the renal factors involved in the occurrence of congestive heart failure; renal blood flow, glomerular filtration and tubular absorption of sodium and water. Influence of the posterior pituitary anti-diuretic hormone. Consideration of therapy in the light of these factors.

9:30—At the Head of the Table—Wesley Bourne, M.D., Montreal, Canada.

10:00—Diagnosis and Treatment of Adrenal Insufficiency—George W. Thorn, M.D., Boston, Massachusetts.

Clinical-Pathological Conference

10:30—Case No. 1: Pathologist James E. Kahler, M.D., Los Angeles. Clinician J. William Hinton, M.D., New York, N. Y.

11:00—Case No. 2: Pathologist Helmuth Sprinz, M.D., Major (MC) U.S.A. Clinician George W. Thorn, M.D., Boston, Massachusetts.

11:30—Case No. 3: Pathologist Howard A. Ball, M.D., San Diego. Clinician William S. McCann, M.D., Rochester, N. Y.

Third General Meeting

Wednesday, April 14, 9:00 A.M., Curran Theater

What's New in Medicine

Chairman: John W. Cline, M.D., *President*

9:00—Anesthesiology—Wesley Bourne, M.D., Montreal, Canada.

9:15—Dermatology—Henry Michelson, M.D., Minneapolis, Minnesota.

9:30—Infectious Disease—Albert Bower, M.D., Los Angeles.

9:40—Pulmonary Disease—William M. M. Kirby, M.D., San Francisco.

9:50—Endocrinology—George W. Thorn, M.D., Boston, Massachusetts.

10:05—Gastro-Enterology—Garnett Cheney, M.D., San Francisco.

10:15—Recess.

10:25—Surgery of Cancer—Richard B. Cattell, M.D., Boston, Massachusetts.

10:40—Use of Anti-Coagulants in Surgery—J. William Hinton, M.D., New York, N. Y.

10:55—Clinical Pathology—Alvin G. Foord, M.D., Pasadena.

11:05—Clinical Radiology—Wilbur Bailey, M.D., Los Angeles.

11:15—Questions in writing to the Speakers.

Special Meetings

Postgraduate Training and Medical Economics

Wednesday, April 14, 2:00 P.M., Empire Room, Sir Francis Drake Hotel

Chairman: E. Vincent Askey, M.D., Los Angeles

2:00—Postgraduate Medical Training: Report on National and Certain State Developments—George F. Lull, M.D., Chicago.

2:30—Practicing Physicians and a Social Outlook on Health—Howard F. West, M.D., Los Angeles.

2:50—A State Medical School Program for Integrated Postgraduate Training and Improved Medical Care—Ward Darley, M.D., Denver, Colorado.

3:20—The New C.M.A. Postgraduate Program as Viewed by a Physician in General Practice—Carroll B. Andrews, M.D., Sonoma.

Comprehensive material should be available to physicians gathered from outlying sections. Digests of important advances in general medicine and surgery should be presented. Lecturers from medical schools and hospitals should conduct seminars, practical discussions, and clinics. Local physicians should participate actively in the presentation of cases and discussions.

3:40—Shortcomings of Medical Practice, Especially from an Internist's Viewpoint—George B. Robson, M.D., San Francisco.

Advances in medicine have added considerably to the cost of present day medical care. Many health insurance schemes have been designed to meet this increased cost. None of these schemes have adequately covered the field of internal medicine. Suggestions will be made for more equitable systems of health insurance.

4:00—A Positive Program for Health Care—Lowell S. Goin, M.D., Los Angeles.

Section Meetings

SECTION ON GENERAL MEDICINE

Howard O. Dennis, M.D., Beverly Hills, *Chairman*
George B. Robson, M.D., San Francisco, *Secretary*
Lewis T. Bullock, M.D., Los Angeles, *Assistant Secretary*



HOWARD O. DENNIS
Chairman, General Medicine



GEORGE B. ROBSON
Secretary, General Medicine

Sunday, April 11, 2:00 P.M., Curran Theater

Joint Meeting with General Practice, General Surgery, Obstetrics and Gynecology, and Public Health

PANEL DISCUSSION ON THE COMPLICATIONS OF PREGNANCY

T. Floyd Bell, M.D., Oakland, Chairman
Moderators: Herbert Traut, M.D., San Francisco, and Charles McLennan, M.D., San Francisco

2:00—**Physiological Changes in the Genito-Urinary Tract During Pregnancy**—Daniel Morton, M.D., San Francisco.

2:20—**Heart Disease Complicated by Pregnancy**—John J. Sampson, M.D., San Francisco.

Known changes in circulatory dynamics attendant on pregnancy and labor are presented. These factors are considered in establishing criteria of candidacy of cardiac patients for pregnancy and pelvic or Caesarean delivery. Impairment of cardiac efficiency and maternal and child survival are statistically analyzed in determining these criteria.

2:40—**Diabetes Complicated by Pregnancy**—Percival A. Gray, M.D., Santa Barbara.

The outlook for the pregnant diabetic is fairly good. In our experience Caesarean section in primiparae has been uniformly successful. Hormonal therapy has not yet completely replaced older procedures. Neither maternal acidosis nor fetal hypoglycemia have been problems. Control of diabetes has been based on blood sugar determinations rather than urinalyses.

3:00—Recess.

3:10—**Pregnancy in Patients with Glomerular Nephritis**—Thomas Addis, M.D., San Francisco, by invitation.

For the past five years a group of patients with glomerular nephritis have been studied during pregnancy by methods that reveal change in the intensity and extent of their renal lesion. No consistent change has been observed. It is concluded that for patients in the latent stage of glomerular nephritis pregnancy is not detrimental.

3:30—**The Problem of German Measles Complicated by Pregnancy**—Harry F. Dietrich, M.D., Beverly Hills.

Abnormalities identical with genetically inherited congenital anomalies can be reproduced in the experimental animal with a variety of noxii. Rubella virus is one such agent in the pregnant human, and so, introduced at the proper time, can cause single and multiple congenital anomalies.

3:50—**General Surgical Complications of Pregnancy**—Ray B. McCarty, M.D., Riverside, California.

Surgical complications during pregnancy may present formidable problems in diagnosis, and/or treatment. As experience with these complications has accumulated along with a better surgical technique, improvement in anesthetics and the method of their administration, and proper preoperative and postoperative consideration of the pregnancy, many former risks to the mother and fetus have been removed. The common general surgical complications will be considered.

4:10—Questions in writing to the speakers.

Monday, April 12, 9:00 A.M., Curran Theater

Joint Meeting with Sections on General Surgery, Pathology and Bacteriology, and Radiology

SYMPOSIUM ON THYROID DISEASES

Moderator: Mayo H. Soley, M.D., San Francisco

9:00—**Pathology of Nodular Goiter**—Stuart Lindsay, M.D., San Mateo.

The gross and microscopic patterns of nodular goiter will be presented. The relationship between secondary epithelial proliferation in involuntary nodules, and benign and malignant nodules of the thyroid gland will be discussed.

9:20—**Therapeutic Problems of Non-Toxic Nodular Goiter**—Morris E. Dailey, M.D., San Francisco.

The experience of the group associated with the Thyroid Clinic has clarified some of the problems concerned with the handling of patients with non-toxic nodular goiter. Points to

be covered include: The differential diagnosis of involuntary and neoplastic goiters, therapy, and results. The frequency of malignant tumors will be emphasized, together with some features that make this type of neoplasm unique.

9:40—Present Therapeutic Approach to Graves Disease—George W. Thorn, M.D., Boston, Mass.

10:10—Antithyroid Drugs—Paul Starr, M.D., Pasadena.

Chemical derivatives of thiourea (such as propylthiouracil) block the formation of thyroid hormone in the secreting epithelium of the thyroid at a variable rate in different individuals. If progressively increased in daily dosage an amount can be found which will produce a progressive depression of the protein bound (hormone) blood iodine and gradually reduce the hyperthyroidism. This treatment may be given in preparation for operation or to cases requiring indefinite medical management.

10:30—Intermission.

10:40—Surgical Treatment of Hyperthyroidism—Richard B. Cattell, M.D., Boston, Mass.

Subtotal thyroidectomy has been accepted for many years as the best treatment for hyperthyroidism. The satisfactory results obtained are dependent upon many factors—proper preparation for operation, good anesthesia and a properly carried out surgical procedure to avoid complications. Special emphasis will be placed upon surgical methods of avoiding injuries to the parathyroids and recurrent laryngeal nerves.

A real advance in the surgical management of hyperthyroidism has been made possible by the proper use of the antithyroid drugs in the preparation of patients for operation. Over 1,200 patients have been so prepared at the Lahey Clinic and operated upon, with but one death. Multiple stage operations are no longer necessary. The period of hospitalization has been reduced to about six days. Results from and complications of subtotal thyroidectomy will be mentioned.

11:10—Radioactive Iodine—Myron Prinzmetal, M.D., Beverly Hills.

Radioactive iodine for the treatment of Graves Disease has proven to be highly successful. The percentage of "cures" has been very high in our hands. No untoward reactions have occurred. In many instances, radioactive iodine has distinct advantages over other methods of treatment. In serious cases, with such complications as advanced heart failure, muscular dystrophy, and psychosis, radioactive iodine has been lifesaving.

11:30—Questions in writing to the Speakers.

Monday, April 12, 1:40 P.M., Curran Theater

Joint Meeting with Urology, General Practice and Pediatrics

1:40—Demonstration: Passive Transfer—Its Use in the Diagnosis of Allergic Conditions—Julian Cohn, M.D., Los Angeles.

Color motion picture showing the advances in the study of allergy by means of skin testing antibodies. Outline of technique and administration. Limited indications for its use.

Symposium on Kidney Diseases

Moderator: Thomas Addis, M.D., San Francisco, by invitation

2:00—Renal Physiology—Ralph E. Homann, M.D., Los Angeles.

A brief review of the present concepts of renal physiology. A discussion in terms of altered physiology of some abnormalities occurring in kidney disease.

2:20—Significance of Albuminuria—David A. Rytand, M.D., San Francisco.

"Proteinuria" is preferable to "albuminuria," for not only albumin but both normal and abnormal globulins appear in urine. While proteinuria is usually the result of renal lesion, this need not always be the case. The quality and quantity of protein in the urine are to be considered in therapy.

2:40—Nephrosis—John D. Lyttle, M.D., Los Angeles.

The natural history of nephrosis in children is discussed on the basis of a critical review of 80 cases studied over a period of 18 years. Charts are shown which illustrate the course in uncomplicated cases and in cases complicated by infection or nephritis or both.

3:00—Metabolic Effects of Renal Insufficiency in Children—Francis Scott Smyth, M.D., San Francisco.

The kidney has an important function in the selective elimination of certain metabolites. Glomerular-filtration and tubular-resorption is able to maintain body fluid equilibrium over a fairly wide variety of conditions. However, with damage from disease or toxic substances, this function may be altered with far-reaching changes in the metabolic picture. Particular attention is given to the acid-base metabolism and the effect of phosphate retention in nephritis.

3:20—Intermission.

3:30—Chemotherapy of Renal Infections—Donald A. Charnock, M.D., Los Angeles.

Chemotherapy has passed through several phases—bacteriotropic, then bacteriostatic. We are rapidly passing into the bactericidal phase. The development of the antibiotics opens the most potent attack on uncomplicated renal infection.

3:50—Treatment of Renal Insufficiency—George W. Thorn, M.D., Boston, Mass.

4:30—Questions in writing to the Speakers.

Tuesday, April 13, 1:15 P.M., Empire Room, Sir Francis Drake Hotel

1:15—Demonstration—Primary Carcinoma of the Lung—Cytologic Study of Sputum and Bronchial Secretions—Seymour M. Farber, M.D., San Francisco, John K. Frost, M.D., San Francisco, by invitation, and Miriam Duschkin, B.A., San Francisco, by invitation.

Recent advances in the identification of cellular elements of bronchial secretions have been made possible through the use of the Papanicolaou and Traut smear technique. This demonstration presents the cytologic criteria for diagnosis of malignant cells found in the sputum and bronchial secretions of patients with primary carcinoma of the lung.

2:00—Business Meeting, Howard O. Dennis, M.D., Los Angeles, presiding.

Symposium on Hemotology

Joint Meeting with Section on Public Health

Moderator: Ernest H. Falconer, M.D., San Francisco

2:10—The Rh Factors in Modern Medicine—Paul G. Hattersley, M.D., Capt. (MC) U.S.A., Letterman General Hospital, by invitation.

A majority of Rh negative patients who are transfused with Rh positive blood become sensitized, and on repeated transfusion may have hemolytic reactions. Women who are sensitized may subsequently deliver infants with erythroblastosis fetalis. It is essential that Rh negative patients receive only Rh negative transfusions.

2:30—Diagnosis and Treatment of Hemolytic Anemias—Robert S. Evans, M.D., San Francisco.

The diagnosis of anemia due to abnormal hemolysis depends on demonstration of increased blood formation and

increased bile pigment excretion. Jaundice is not a constant sign. Congenital or familial hemolytic anemia can be sharply differentiated from acquired hemolytic anemia. The treatment for both groups is transfusion and if necessary splenectomy.

2:50—**Splenomegaly and Its Relation to the Liver in Hematopoietic Disorders**—S. P. Lucia, M.D., San Francisco.

The spleen usually participates in disorders of the hematopoietic system in a passive manner, excepting in certain syndromes characterized by hemolysis or extra-medullary erythropoiesis. The removal of the spleen is beneficial only in the following conditions: (1) Diseases having their origin in the spleen; (2) Aberrant physiological alterations due solely to splenic dysfunction; and, (3) Diseases in which the presence of an enlarged spleen places a heavy physiological burden on the liver.

3:10—**Newer Methods in the Treatment of Leukemias and Lymphomas**—Howard R. Bierman, M.D., San Francisco.

An evaluation of the new chemotherapeutic methods: The rationals, aims and present status of the amine mustards, polyglutamic acid derivatives, urethane, thiouracil, noncarbinols, and hydroxyacids (myelokentric and lymphokentric acids), and the diamidines as used in Hodgkin's disease, lymphosarcoma, mycosis fungoides, myelomata, myelogenous, lymphogenous and monocytic leukemias. Also, a description of the complications, the supportive therapy required, and course of patients treated with these agents.

3:30—**Intermission.**

3:40—**Treatment of Hypochromic Anemia and Certain Macrocytic Anemias**—Ernest H. Falconer, M.D., San Francisco.

(1) Hypochromic anemia: Causes: (a) blood loss; (b) failure of iron absorption; and (c) infection—interference with utilization of systemic iron. (2) Macrocytic anemia, Addisonian pernicious anemia, sprue and dietary deficiency. Cause and treatment.

4:00—**Organizational Problems of Blood Banks**—Donald C. Harrington, M.D., Stockton.

This paper discusses the problems encountered by a relatively small county medical society in its efforts to organize a blood bank to serve a community of about 200,000 people. The steps taken in the organization of the bank and the final pattern will be presented.

4:20—**Questions in writing to the Speakers.**

5:00—**Recess: Annual Meeting of California Society of Internal Medicine.**

SECTION ON GENERAL SURGERY

Clarence J. Berne, M.D., Los Angeles, *Chairman*
A. Morse Bowles, M.D., Santa Rosa, *Secretary*
Conrad J. Baumgartner, M.D., Beverly Hills, *Assistant Secretary*



CLARENCE J. BERNE
Chairman, General Surgery



A. MORSE BOWLES
Secretary, General Surgery

Sunday, April 11, 2:00 P.M., Curran Theater

Joint Meeting with Sections on General Medicine, Obstetrics and Gynecology, General Practice and Public Health

For Program, see Section on General Medicine

Monday, April 12, 9:00 A.M., Curran Theatre

Joint Meeting with Sections on General Medicine, Radiology, Pathology and Bacteriology

For Program, see Section on General Medicine

Tuesday, April 13, 2:00 P.M., Curran Theater

Joint Meeting with Sections on Industrial Medicine and Surgery, General Practice, and Neuropsychiatry

2:00—**Chairman's Address: Management of Acute Peritonitis**—Clarence J. Berne, M.D., Los Angeles

A review of the pathology and present status of the management of acute peritonitis, particularly that of appendiceal origin. The relative value of sulfonamides, penicillin and streptomycin will be stressed.

2:20—Surgical Significance of Acute Abdominal Pain—J. William Hinton, M.D., New York, N. Y.

A discussion of organic diseases, physiological conditions, and psychogenic factors producing acute abdominal pain with the indications and contra-indications for surgical intervention.

3:00—Business Meeting and Election of Officers.

Traumato-Therapy Symposium

Chairman of Panel: George Sanderson, M.D., Stockton

3:10—The Immediate Care of the Severely Injured Patient—John J. Loutzenheiser, M.D., San Francisco.

Discussion of phases of surgical management of severely injured persons. (1) Medical aid organization needs; (2) Initial surgery—its how, when and wheres; (3) Reparative surgery—general principles; (4) Reconstructive surgery—relation to previous phases; and (5) Rehabilitative measures—early recognition of eventual needs of physically handicapped.

3:30—Decline in the Use of Plasma—Arthur C. Pattison, M.D., Pasadena.

A discussion of the trend away from plasma and toward the more liberal use of whole blood in replacement therapy. Predicated on: (1) The reactions to and deficiencies of pooled plasma; (2) the demonstration of the masked anemia attending "chronic shock of nutritional deficiencies"; and (3) the reduced red cell volume consequent to traumatic injuries.

3:50—The Nervous Woman in Industry—Kenneth Drake Gardner, M.D., San Francisco.

The nervous woman in industry is a disability problem. Maladjustments and the excessive use of stimulants are etiological factors. Organic disease usually is not demonstrated except for menopausal instabilities and psychosomatic manifestations. Treatment is symptomatic and an attempt to readjust to life, work and home.

4:10—Causalgia in Peripheral Nerve Lesions—Edward W. Davis, M.D., San Francisco, and Eugene McDaniel Webb, M.D., San Francisco, by invitation.

Consideration will be given to the incidence, characteristics and therapy for causalgia of post-traumatic origin in lesions of the peripheral nerves.

Discussion by Howard C. Naffziger, M.D., San Francisco.

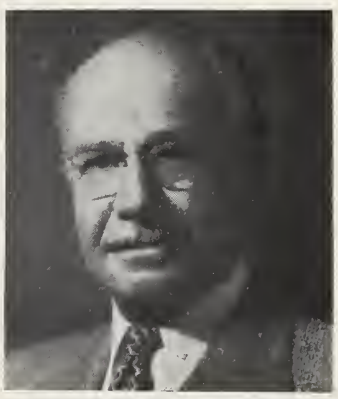
4:40—Question Period.

SECTION ON GENERAL PRACTICE

Stanley R. Truman, M.D., Oakland, *Chairman*
Karl L. Dieterle, M.D., Los Angeles, *Secretary*



STANLEY R. TRUMAN
Chairman, General Practice



KARL L. DIETERLE
Secretary, General Practice

Sunday, April 11, 2:00 P.M., Curran Theater

Joint Meeting with Sections on General Medicine, General Surgery, Obstetrics and Gynecology, and Public Health

For Program, see Section on General Medicine

Monday, April 12, 9:00 A.M., Empire Room, Sir Francis Drake

9:00—Postoperative Genital Urinary Complications—Elmer Belt, M.D., Los Angeles.

The most frequent postoperative urinary problem after general surgery is urinary retention. Retention may be due to previously unrecognized dynamic obstruction, but is more often psychogenic or due to a sympathetic nervous system disturbance. Catheterization must not be feared. The mistake of permitting over-distention must not be permitted. Irritative postoperative lesions are usually due to trigonitis, cystitis, or pyelitis. Anuria may be due to shock, chemical renal injury, or block due to crystals, detritus, or edema. Operative injuries to the urinary tract are more frequent than ordinary statistics reveal, because of failure in reporting.

9:25—Discussion.

9:35—Common Pediatric Problems in General Practice—Sam J. McClendon, M.D., San Diego.

There are 335 pediatricians in California to serve some 10,000,000 persons. The problems relative to public health and the control of diseases rests primarily with the general practitioner. One of the major problems is that of rheumatic fever, in California just as serious as any other area in the U.S.A. The general practitioner is also concerned with all phases of preventive pediatrics. Recent advances in many fields are helping us to have a healthier citizenry. California is beset by many legislative panaceas; we must familiarize with these trends to preserve the best that private practice offers.

10:00—Discussion.

10:10—Problems of General Practice in Rural California—Hollis L. Carey, M.D., Gridley.

A brief discussion is presented of the more important conditions related to rural medical practice in this State. Provisions for training nursing and technical personnel for this type of smaller rural hospital are needed. Since the major burden of the care of his patients rests on the physician in rural and general practice, it is reasonable for him to assume a large share of the responsibility of directing and guiding the developments of this branch of medical practice.

10:35—Discussion, by J. Frank Doughty, M.D., Tracy.

10:45—Recent Advances in the Treatment of Syphilis—Thomas H. Sternberg, M.D., Los Angeles.

A review of the use of penicillin preparations, alone or combined with bismuth, mapharsen or fever, in the treatment of early, latent and late syphilis. Current research data of the Syphilis Study Section of the National Institute of Health are analyzed. Ambulatory and hospital treatment schedules are recommended.

11:10—Discussion.

11:20—Chairman's Address: Opportunities and Responsibilities of the General Practitioner—Stanley R. Truman, M.D., Oakland.

11:40—Business Meeting and Election of Officers.

Monday, April 12, 2:00 P.M., Curran Theater
Joint Meeting with Sections on General Medicine, Urology, and Pediatrics
For Program, see Section on General Medicine

Tuesday, April 13, 9:00 A.M., Rooms 214-217 St. Francis Hotel
Joint Meeting with Section on Public Health
For Program, see Section on Public Health

Tuesday, April 13, 2:00 P.M., Curran Theater
Joint Meeting with Sections on General Surgery, Industrial Medicine and Surgery, and Neuropsychiatry
For Program, see Section on General Surgery

SECTION ON ANESTHESIOLOGY

Ida Hessig, M.D., Altadena, *Chairman*
William B. Neff, M.D., San Francisco, *Secretary*



IDA HEISSIG
Chairman, Anesthesiology



WILLIAM B. NEFF
Secretary, Anesthesiology

Sunday, April 11, 1:30 P.M., Room 220, St. Francis Hotel

1:30—Recent Advantages in Pediatric Anesthesia—Digby Leigh, M.D., Vancouver, B.C.

2:10—Discussion by Harry Lapp, M.D., San Francisco.

2:20—Problems in Departmental Organization—Francis J. Murphy, M.D., San Francisco.

2:40—Discussion by John Dillon, M.D., Los Angeles.

2:50—Anesthetic Morbidity—Ernest H. Warnock, M.D., Los Angeles.

Patient morbidity from anesthetic agents is serious. Improvement in methods and a better understanding of the physiology of anesthesia has decreased morbidity perceptibly. Further decrease may be brought about by pre- and postoperative care by the anesthesiologist.

3:10—Discussion by Malcolm Hawk, M.D., Palo Alto.

3:20—White Water and Black Magic—Mr. Richard C. Gill, Palo Alto, by invitation.

Jungle aspects of the Terminal Expedition resulting in the evolution of the modern clinically adequate curare. Motion picture of the jungle side of the 1938-39 Gill Merrill Expedition into northeastern Amazonia. The expedition had as its objective the substantiation of the ethnobotany of several types of curare and—most importantly—the quantitative and qualitative evolution of a specific variant of the crude drug to fulfill certain predetermined clinical requisites.

Monday, April 12, 2:00 P.M., Room 210, St. Francis Hotel

2:00—Business Meeting.

2:30—A Comparison of Demerol and Methadon as Analgesics—Maurice L. Tainter, M.D., Rensselaer, New York.

Demerol and Methadon have advantages over morphine. Demerol requires a higher dosage than Methadon, but produces less respiratory depression. Therefore, it can be used

more freely in cases where respiratory depression is contraindicated. Demerol does not depress the cough reflex, and Methadon is preferred for this purpose. Both drugs have a sufficient tendency to produce addiction that the usual narcotic restrictions should be observed.

3:00—Experimental and Clinical Investigation of Several New Analgesics During Nitrous Oxide Anesthesia—Preliminary Report—Richard Thompson, M.D., San Francisco, by invitation.

Nitrous oxide anesthesia with moderate premedication can be made sufficiently flexible to meet most surgical demands only when supplemented by additional injections of analgesica and/or relaxants. Accordingly, the properties of two new analgesic agents were investigated and their effects were compared with those of demerol and morphine when used to obtund the reflexes during nitrous oxide-oxygen anesthesia.

3:20—Discussion by Bruce Anderson, M.D., Oakland.

3:30—Problems Confronting the Anesthesiologist When Excessive Fluids Are Required During Operation—Fenimore Davis, M.D., Oakland.

In a series of three cases requiring large amounts of blood during surgery the end results were not good. Obtaining blood of the correct type has not been easy in an emergency, and there has been worked out no satisfactory way of quickly estimating loss so that replacement may be adequate. It is as dangerous to give too much fluid to these patients as too little. Recent information on the use of blood plasma will be discussed.

3:50—Discussion by Grace Binger, M.D., San Jose.

Tuesday, April 13, 11:00 A.M., Room 210, St. Francis Hotel

NOTE: 9:30 a.m., Curran Theater. Wesley Bourne, M.D., Professor of Anesthesia, McGill University, Montreal, Canada, will address the Second General Meeting. Subject: At the Head of the Table.

11:00—Spinal Anesthesia with Preoperative and Postoperative Factors Integrated—Seth W. Sensiba, M.D., Santa Monica.

Valuable information concerning drugs and their application is progressively available to facilitate safer and more effective spinal nerve block. Brief consideration of subarachnoid spinal anesthesia with special reference to pre- and postoperative sedation and analgesia. Physiological functions, both cellular and general, are of primary importance.

11:25—Discussion by Charles Wycoff, M.D., San Francisco.

11:35—Relation of Neurological Complications of Subarachnoid Block to Some Unseen Dangers of New Techniques—Marshall L. Skaggs, M.D., San Francisco.

SECTION ON DERMATOLOGY AND SYPHILOLOGY

Maximilian E. Obermayer, M.D., Los Angeles, *Chairman*
Robert A. Stewart, M.D., Berkeley, *Vice-Chairman*
W. W. Duemling, M.D., San Diego, *Secretary*
Ervin H. Epstein, M.D., Oakland, *Assistant Secretary*



MAXIMILIAN E. OBERMAYER
Chairman
Dermatology and Syphilology



W. W. DUEMLING
Secretary
Dermatology and Syphilology

Monday, April 12, 2:00 P.M., Letterman Hospital

2:00—Seminar on Histopathology—(Note: Meeting confined to Registrants of Seminar.)

Tuesday, April 13, 9:30 A.M., Borgia Room, St. Francis Hotel

9:30—Present Status of our Knowledge of Lupus Erythematosus—Henry E. Michelson, M.D., Minneapolis, Minnesota.

10:00—Round Table Discussion on Therapy.
Moderator: Henry E. Michelson, M.D., Minneapolis, Minnesota

Tuesday, April 13, 2:00 P.M., Borgia Room, St. Francis Hotel

Joint Meeting with Section on Eye, Ear, Nose and Throat

2:00—Aphthous Oral and Genital Ulcers with Conjunctivitis. (Behcet's Type Symptom Complex—Lawrence M. Nelson, M.D., Santa Barbara.

Case of a seventeen year old white male with painful, eroding aphthous ulcers of the mouth and genitalia and recurrent mild conjunctivitis. No cause for the condition has been found and no treatment has resulted in any permanent improvement.

2:25—Discussion by Otto P. Diederich, M.D., Fresno.

2:35—Treatment Problems of Marginal Blepharitis—Norman M. O'Farrell, M.D., San Diego.

Marginal blepharitis is usually a local manifestation of seborrheic dermatitis. As such, treatment must be directed not alone to the lids but to the scalp, and to such general factors as obesity, vitamin intake, and fatty control of the diet.

3:00—Discussion.

3:10—Visible Oral Lesions—Francis A. Sooy, M.D., San Francisco.

A kodachrome slide demonstration of the gross and microscopic appearance of a variety of oral diseases. The photographic technique used is demonstrated.

3:30—Discussion.

3:40—External Otitis—Charles W. Rees, M.D., San Diego.

Otitis externa is one of the most common diseases seen by the otologist. The pathologic changes which may occur in the external ear are classified. The etiological agents of inflammation of the external ear structures are discussed minimizing the importance of fungi as primary invaders. Therapy for symptomatic relief is outlined and the specific action of therapeutic agents is reviewed.

4:00—Discussion.

4:10—Evaluation of Therapy in Ocular Syphilis—David O. Harrington, M.D., San Francisco, and Randall Henry, M.D., San Francisco, by invitation.

(1) Acute ocular syphilis. (a) Interstitial Keratitis—evaluation of fever therapy and iontophoresis with penicillin; (b) syphilitic iritis—treatment with penicillin and fever therapy; and (c) syphilitic choroiditis—similar treatment. (2) Chronic ocular syphilis. (a) Tabo-paresis with ocular involvement—penicillin and fever therapy; and (b) syphilitic optico-arachnoiditis—surgical treatment. (3) Remarks on Tryparsamide. (4) Pitfalls of penicillin treatment.

4:30—Discussion.

Wednesday, April 14, 9:00 A.M., Borgia Room, St. Francis Hotel

9:00—Chairman's Address—Maximilian E. Obermayer, M.D., Los Angeles.

9:30—Acanthosis Negricans with Unusual Cutaneous and Clinical Features—William H. Goeckerman, M.D., Los Angeles, and Louis Wilhelm, M.D., Los Angeles.

A case of rapid dissemination of discrete verrucous papules over the entire body before any involvement of the classical areas with the usual acanthosis and pigmentation. No physical complaint prior to the eruption, yet on necropsy shortly after eruption, generalized metatasis was observed.

9:55—Discussion by Ernest K. Stratton, M.D., San Francisco.

10:05—Time-Temperature Relationships in Thermal Blister Formation—Craig Williamson, M.D., Los Angeles, by invitation, and Julius R. Scholtz, M.D., Los Angeles.

Preliminary statement on studies of blister thresholds with reference to the number of degree-minutes necessary to produce bullae in the skin of the normal adult forearm. Time and stages of development and the sequelae of the blisters.

10:30—Discussion by Maximilian Obermayer, M.D., Los Angeles.

10:40—Superficial Basal Cell Epithelioma of the Covered Parts of the Body—William F. B. Harding, M.D., San Francisco, by invitation.

Review of the clinical aspects and histopathology of intraepidermal epitheliomas of the basal cell type. Selection of the proper method of treatment will be emphasized. Report on incidence of lesions in the Visible Tumor Clinic of the U. C. Hospital.

11:00—Discussion by Louis H. Winer, M.D., Los Angeles, and Stuart C. Way, M.D., San Francisco.

11:10—Myelitis in Early Lues—Ernest K. Stratton, M.D., San Francisco.

A generalized dermatitis with exfoliation in a patient with secondary lues after eight injections of neoarsphenamine. Neurological symptoms developed in a few weeks and led to a fatal issue. Question: Arsenical intoxication or infection (luetic) was the basic factor?

11:30—Discussion by Helen L. Starbuck, M.D., San Francisco.

11:45—Business Meeting and Election of Officers.

SECTION ON EYE, EAR, NOSE AND THROAT

Dohrmann K. Pischel, M.D., San Francisco, *Chairman*
Russell Fletcher, M.D., Berkeley, *Vice-Chairman*
George L. Kilgore, M.D., San Diego, *Secretary*



DOHRMANN K. PISCHEL
Chairman
Eye, Ear, Nose and Throat



GEORGE L. KILGORE
Secretary
Eye, Ear, Nose and Throat

Monday, April 12, 2:00 P.M., Green Room, St. Francis Hotel

2:00—Some Principles of Plastic Surgery of the Eyelids—Crowell Beard, M.D., San Jose.

In the light of the recent advances and the older accepted principles, the management of some of the commoner eyelid defects will be discussed . . . not those of military origin. The relationship between the plastic surgeon and the ophthalmologist in caring for these conditions will be considered.

2:20—Discussion.

2:30—Encephalitis from the Standpoint of the Ophthalmologist—Dwight Trowbridge, M.D., Fresno.

The presenting complaints of 165 cases treated in the Fresno General Hospital in the past five years will be reviewed. Emphasis will be on ocular symptoms and signs. Correlation of the presence or absence of certain ocular signs and symptoms with the serological diagnosis of western equine or St. Louis type encephalitis will be attempted.

2:50—Discussion.

3:00—Operation for Congenital Cataract—Otto Barkan, M.D., San Francisco.

The subject of congenital cataract is given little space in textbooks of today. In the present article the disadvantages of the traditional treatment by needling are noted. A technique of "linear extraction" with recent modifications designed to permit safe removal of congenital cataracts in early infancy as well as later is given.

3:20—Discussion.

3:30—Treatment of Retinoblastoma—Jerome Bettman, M.D., San Francisco.

The methods of treating retinoblastoma are presented, together with consideration of clinical judgment involved in which treatment to use. A review of interesting cases of retinoblastoma treated at Stanford Hospital is presented.

3:50—Discussion.

4:00—A New Concept of the Anatomy of the Perilenticular Spaces—Henry Minsky, M.D., New York, by invitation.

A color motion picture showing the result of anatomical researches in the spaces around the lens and its suspensory ligament, and their relations to the anterior and posterior chamber.

Tuesday, April 13, 9.00 A.M., Green Room, St. Francis Hotel

9:00—A Technique for Tonsillectomy under General Anesthesia—Lewis F. Morrison, M.D., San Francisco.

A kodachrome picture showing the technique employed at the University of California Hospital for the removal of tonsils and adenoid tissue. The position of the patient, surgical set-up, instruments, and the advantage of added exposure when the operator stands at the head of the table. Advantage of a dry field and the method employed to obtain and maintain hemostasis.

9:20—Discussion.

9:30—Observations on Blast Damaged Ear Drums—Arthur H. Rice, M.D., Berkeley.

Eighty-seven uncontaminated blast perforations of the tympanum were observed. A system of classification as to severity is offered as a means of evaluating treatment in future reports. Most of the perforations were treated by application of a patch. Observations on healing and results.

9:50—Discussion.

10:00—Factors Influencing the Choice of Hearing Aids—William T. Duggan, M.D., San Francisco.

A resume of the work now being done in various hearing research centers in this county; the importance of an acoustic laboratory; the types of aids now commonly used; who should wear hearing aids; some of the reasons why so few wearers obtain satisfactory results.

10:20—Discussion.

10:30—The Treatment of Sinusitis in Children—Victor Goodhill, M.D., Los Angeles.

No single panacea is offered for this problem. The therapeutic approach is based upon an understanding of the embryology, anatomy and physiology of the nose and paranasal sinuses in the growing child. The judicious employment of allergic principles and conservative surgical techniques, will do much to solve it.

10:50—Discussion.

11:00—Practical Points in the Management of the Allergic Child—William C. Deamer, M.D., San Francisco.

Asthma often accompanies allergic rhinitis which has been thought to be infectious "colds." The etiology of both the nasal and pulmonary allergy is usually identical and is more often inhalant than food. The commonest inhalant factor is house dust and its components, the elimination of which is probably more important than desensitization.

11:20—Discussion.

11:30—Business Meeting.

Tuesday, April 13, 2:00 P.M., Borgia Room, St. Francis Hotel

Joint Meeting with Dermatology and Syphilology

For Program, see Section on Dermatology and Syphilology

SECTION ON INDUSTRIAL MEDICINE AND SURGERY

Keene O. Haldeman, M.D., San Francisco, *Chairman*
Joseph D. Peluso, M.D., Los Angeles, *Vice-Chairman*
Nelson J. Howard, M.D., San Francisco, *Secretary*



KEENE O. HALDEMAN
Chairman
Industrial Medicine and Surgery



NELSON J. HOWARD
Secretary
Industrial Medicine and Surgery

Sunday, April 11, 2:00 P.M., Green Room St. Francis Hotel

2:00—The Rx for Light Work and the Obstacles It May Encounter—Christopher Leggo, M.D., Crockett.

The problems encountered in "easy work" requests for the partially disabled employee, the difference between the temporary and the permanent partial, when "easy work" is actually a rehabilitation procedure, and when an incentive for delayed recovery. Some cases when "easy work" is of advantage and when it is a false economy and harmful to all concerned.

2:20—Discussion by Rees B. Rees, M.D., San Francisco.

2:30—Traumatic Injuries to the Abdomen and Its Contents—Donald C. Collins, M.D., Los Angeles.

Severe traumatic injuries to the abdomen and its contents are steadily increasing due to speeding up of all types of transportation. Rapid and correct diagnoses are essential to save lives; particularly, the recognition of injuries to abdominal viscera or their blood supply. This is the Industrial Surgeon's responsibility.

2:50—Discussion by Edmund Butler, M.D., San Francisco, and E. Eric Larson, M.D., Los Angeles.

3:00—Tumors and Trauma and Industrial Liability—Jesse L. Carr, M.D., San Francisco.

While still regarded in many centers as an improbability, malignancies in the human body subsequent to single or multiple traumata are becoming regarded, not only by Industrial Accident referees, but also by some physicians, as occurring with an apparent direct relationship to the trauma. It is the purpose of this paper to review the essential medical facts, the recent literature, and the latest medical testimony with court and Accident Commission decisions relative to this alleged relationship, with special emphasis on the medical testimony which has led to the granting of industrial awards.

3:20—Discussion by A. M. Moody, M.D., San Francisco, and David A. Wood, M.D., San Francisco.

3:30—Arthrotomy of the Knee, with Removal of the Semilunar Cartilage — F. Harold Downing, M.D., Fresno.

Color film showing anatomical demonstration of the knee. Surgical technique of excision of the medial semilunar cartilage. Preoperative examination and postoperative results. Introductory remarks will emphasize the need for careful total excision of the semilunar cartilage when indicated.

3:50—Discussion by Merrill C. Mensor, M.D., San Francisco, and Ralph Soto-Hall, M.D., San Francisco.

4:00—Swine Erysipeloid—Martin W. Debenham, M.D., San Francisco.

"Swine Erysipeloid" is the name given to a type of cellulitis peculiar to meat and fish handlers. It is rare in any other class of patients, but when encountered presents definite problems both as to diagnosis and treatment. The findings of a series of cases treated over a 10-year period are presented and discussed.

4:20—Discussion by Joseph H. Boyes, M.D., Los Angeles, and J. Minton Meherin, M.D., San Francisco.

4:30—Differential Diagnoses and Treatment of the Infectious Arthritities—Leon O. Parker, M.D., San Francisco.

The differential diagnosis of the various infectious joint diseases, as well as those that simulate infection but do not prove to be so, will be presented. The diagnostic findings, history, physical examination, x-ray, joint puncture, and joint biopsy will be evaluated. Treatment will be approached from the problem as to when to immobilize and when to force restoration of function, as well as the use of chemotherapy.

4:50—Discussion by Robert K. Gustafson, M.D., Pasadena, and Arthur Haim, M.D., San Francisco.

Monday, April 12, 9:00 A.M., Green Room, St. Francis Hotel

9:00—Pulmonary Affections of Occupational Origin—Rutherford T. Johnstone, M.D., Los Angeles.

It is opportune that the attention of the general practitioner, radiologist, and "chest specialist" be called to the recently discovered, adverse reaction of the lungs to certain silicates and new chemicals utilized in industry. Radiography alone is not sufficient to make the diagnosis of these occupational pulmonary affections. (Lantern Slides.)

9:20—Discussion by Sidney Shipman, M.D., San Francisco.

9:30—Median Nerve Injuries in Fractures of the Wrist—N. Meadoff, M.D., Bakersfield.

Three cases. (1) Surgical exploration of the median nerve at the wrist with primary sensory and sympathetic nerve paralysis with normal motor function following a transcarpal dislocation of the wrist. (2) Two cases of sensory median nerve impairment after the fractures of the wrist were placed in casts. The pertinent anatomical factors and the literature are reviewed.

9:50—Discussion by John B. DeC.M. Saunders, M.D., San Francisco, and John D. Gillis, M.D., Los Angeles.

10:00—Ambulatory Traction Splint in Fractures of Upper End of Humerus—Donald McNeil, M.D., Sacramento.

Our experience in treating these fractures with the usual type of abduction traction splints, has not been satisfactory. Treatment by traction in recumbency has obvious disadvantages economically. A simple ambulatory traction splint is described which allows alignment of the lower fragment with the abducted and anteriorly angulated upper fragment.

10:20—Discussion by Thomas R. Haig, M.D., Sacramento, and Ralph Soto-Hall, M.D., San Francisco.

10:30—Reconstruction of the Ankle—Orris R. Myers, M.D., Eureka.

This paper is based upon an experience of attempting to reconstruct the external malleolus and distal portion of the fibula. There was a marked varus deformity and pain, weakness of the ankle joint. Osteogenous bone graft was used to replace the lateral malleolus; 11-year follow-up. A brief resume will be included in the paper on reconstruction work of the ankle joint.

10:50—Discussion by Donald R. King, M.D., San Francisco.

11:00—Costly Mistakes Made in the Treatment of Complicated Fractures—Douglas D. Toffelmier, M.D., Oakland.

It has been observed that complicated fractures treated by external pin fixation, or internal screws and plates, frequently come to non-union and need reoperation. The presence of infected pin holes causes disastrous results in subsequent bone graft procedures. An idea or two on how to avoid disaster in these cases.

11:20—Discussion by Frederick C. Bost, M.D., San Francisco.

11:30—Business Meeting and Election of Officers.

Tuesday, April 13, 2:00 P.M., Curran Theater

Joint Meeting with General Surgery, Neuropsychiatry, and General Practice

For Program, see Section on General Surgery

SECTION ON NEUROPSYCHIATRY

Robert B. Aird, M.D., San Francisco, *Chairman*
Cullen W. Irish, M.D., Los Angeles, *Secretary*



ROBERT B. AIRD
Chairman, Neuropsychiatry



CULLEN W. IRISH
Secretary, Neuropsychiatry

Sunday, April 11, 2:00 P.M., Rooms 214-217,
St. Francis Hotel

PSYCHIATRIC SECTION

2:00—Anxiety Reactions to Military Trans-Himalayan Plane Flights During World War II—Henry J. Wegrocki, M.D., Los Angeles.

The A.T.C. trans-Himalayan flights, although non-combat in nature, were, nevertheless, provocative of many profound and crippling anxiety reactions among flying personnel. The multiple factors entering into and modifying these reactions are considered by comparing two groups, 55 defaulting and 45 nondefaulting flyers, with reference to personality vulnerability, motivation and degree of aerial trauma experienced.

2:20—Discussion by Cullen Ward Irish, M.D., Los Angeles, and Norman A. Levy, M.D., Beverly Hills.

2:30—Energy Dynamics in Psychotherapy—Herbert A. Duncan, M.D., Pasadena.

The mobilization, channeling and utilization of emotional tension is implied in human activity. A non-technical interpretive schema of its operation initiates insight, supports the patient, satisfies his urge to have something done, and lays the basis for more penetrating, individualized interpretations. Applicable to group and individual psychotherapy.

2:50—Discussion by H. Douglas Eaton, M.D., Los Angeles, and John F. Card, M.D., San Francisco.

3:00—The Significance of Some Mental Symptoms During Convalescence from Surgical Operations—Joseph G. Rushton, M.D., Los Angeles.

Surgery may be considered a type of trauma. The mental reaction of such trauma may be predominantly organic or functional. The organic reactions appear as deliria. Importance of early recognition and prompt treatment stressed. Surgery may exaggerate or reveal defects of personality previously compensated for.

3:20—Discussion by Walter F. Schaller, M.D., San Francisco, and Alvin V. Gerty, M.D., Pasadena.

3:30—Persistent Self-Mutilation Following Surgical Procedures—Paul A. Gliebe, M.D., San Francisco, and Leon Goldman, M.D., San Francisco.

Conscious and unconscious needs for continued punishment may complicate the postoperative course of surgical procedures. Recognition of the underlying emotional factors is difficult, and often delay leads to chronic states of invalidism with its attendant social and economic loss.

3:50—Discussion.

4:00—Psychiatric Preceptee Training for General Medical Practitioners—Eugene Ziskind, M.D., Los Angeles.

A report on a project under which medical practitioners are assigned appointments under the direction of psychiatrists. Emphasis is placed on practical experience in the management of psychologically conditioned somatic complaints encountered in general practice.

4:20—Discussion by J. Peter Frostig, M.D., Los Angeles, and Philip Solomon, M.D., Beverly Hills.

Monday, April 12, 2:00 P.M., Rooms 214-217,
St. Francis Hotel

NEUROLOGY SECTION

2:00—Election of Officers and Business Meeting.

2:10—Chairman's Address: Role of Tissue Permeability with Particular Reference to the Blood-Brain Barrier in Diseases of the Central Nervous System—Robert B. Aird, M.D., San Francisco.

Alterations of permeability of the vascular tree supplying the C.N.S. are presumably of fundamental importance in the metabolism thereof. Pathological conditions of the system are known to modify this basic mechanism. Various studies on this problem will be reviewed and a brief report made on new approaches which are being tried, that give promise of modifying this mechanism and affording a basis for therapy in certain neurological conditions.

2:30—Electromyographic Diagnosis of Lower Motor Neuron Disease—James G. Golseth, M.D., Los Angeles, and O. Leonard Huddleston, M.D., Los Angeles.

Skeletal muscle deprived of its nerve supply begins to fibrillate spontaneously. As a result of denervation fibrillation, characteristic voltages are generated which can be recorded with the electromyograph. Such electromyograms afford positive evidence of lower motor neuron disease.

2:50—Discussion by Nicholas A. Bercel, M.D., Los Angeles, and B. Feinstein, M.D., San Francisco.

3:00—Extradural Cerebellar Hemorrhage, Report of Case and Review of the Literature—Frank M. Anderson, M.D., Los Angeles.

Extradural hemorrhage limited to the posterior fossa has been recorded by only four writers, with a total of five cases. Three of these were operated upon and recovered. The present case had a two-week history and presented papilledema, bilateral adducens palsy, ataxia, unsteady gait and diminished tendon reflexes. Ventriculogram, followed by suboccipital craniotomy. Removal of extradural clot. Recovery.

3:20—Discussion by H. M. Cuneo, M.D., Los Angeles, and Edmund J. Morrissey, M.D., San Francisco.

3:30—Observations on the Use of Tantalum in Cranioplasty—Nathan C. Norcross, M.D., Oakland.

Tantalum plate has enjoyed a considerable vogue of late. We can delimit its value and bring out certain features concerning its use when it is considered as a material for cranioplasties. In the late follow-up of such, the technique of implanting as well as its use in potentially infected areas is important. If certain features of its use are disregarded, failures are bound to occur.

3:50—Discussion by Edward W. Davis, M.D., San Francisco.

4:00—Use of Testosterone Propionate in Pituitary Tumor Case (Seven Years Observation)—Charles Posner, M.D., Pasadena.

Effects of testosterone propionate on personality, epiphyseal closure, sexual development of 24-year-old eunuchoid male patient with intrasellar tumor, clinically chromophobe. X-ray therapy. Patient now in good health.

4:20—Discussion by C. Hunter Shelden, M.D., Los Angeles, and Cyril B. Courville, M.D., Los Angeles.

4:30—Head Retraction Reflex—Robert Wartenberg, M.D., San Francisco.

Demonstration of a film on the Head Retraction Reflex. This reflex, when positive, indicates a bilateral lesion of supracervical pyramidal tracts, and has proven to be of practical importance.

4:50—Discussion.

Tuesday, April 13, 2:00 P.M., Curran Theatre

Joint Meeting with Sections on General Surgery, Industrial Medicine and Surgery, and General Practice

For Program, see Section on General Surgery

SECTION ON OBSTETRICS AND GYNECOLOGY

T. Floyd Bell, M.D., Oakland, *Chairman*
A. M. McCausland, M.D., Los Angeles, *Vice-Chairman*
D. A. Dallas, M.D., San Francisco, *Secretary*



T. FLOYD BELL
Chairman
Obstetrics and Gynecology



D. A. DALLAS
Secretary
Obstetrics and Gynecology

Sunday, April 11, 2:00 P.M., Curran Theater

Joint Meeting with Sections on General Medicine, General Surgery, General Practice and Public Health

For Program, see Section on General Medicine

Monday, April 12, 9:00 A.M., Room 261, St. Francis Hotel

9:00—Infant Resuscitation—Harold M. Lyons, M.D., San Francisco.

This paper, with no claim at originality, touches on the physiological processes active in a newborn, after birth, and offers a review of the effective methods of resuscitation as opposed to time-honored but inefficient ones. Gratifying reduction in neonatal mortality is the result of a minimum of time expended.

9:30—Discussion by Harold Faber, M.D., San Francisco.

9:40—Poliomyelitis in Pregnancy—Jane Schaefer, M.D., San Francisco, and Edward B. Shaw, M.D., San Francisco.

The various types of acute anterior poliomyelitis complicating pregnancy in all trimesters have been treated in the Communicable Disease Department of Children's Hospital. The case histories are summarized and the progress of the disease as a whole surveyed with special reference to the obstetrical outcome. The high percentage of abortion in patients with acute poliomyelitis is noted and the therapeutic measures for patients in whom the disease occurs late in pregnancy are considered.

10:00—Discussion by Edward B. Shaw, M.D., San Francisco.

10:10—Early Ambulation in Obstetrics and Gynecology—Stirling G. Pillsbury, M.D., Long Beach.

(1) Early ambulation in obstetrics. (a) History; (b) what is early ambulation; (c) data, and (d) advantages. (2) Early ambulation in gynecology. (3) Contraindications. (4) Legal aspects.

10:30—Discussion by Robert Dunn, M.D., Palo Alto.

10:40—Recess.

10:50—The Physiological Basis of Symptoms in Eclampsia —Ernest W. Page, M.D., Berkeley.

(1) The causes of the subjective symptoms in pre-eclampsia. (2) The nature of the proteinuria, and of hypertension. (3) The factors responsible for the edema. (4) The origin of the hepatic damage. (5) The predisposing causes of the convulsions. (6) The direction of therapeutic measures.

11:10—Discussion by Charles McLennan, M.D., San Francisco.

11:20—Business Meeting.

Tuesday, April 13, 2:00 P.M., Room 261, St. Francis Hotel

2:00—Chairman's Address—T. Floyd Bell, M.D., San Francisco.

2:30—Hormonal Therapy in Sterility, Habitual Abortion and Premature Labor—Raphael B. Durfee, M.D., San Francisco.

The clinical use of Chorionic Gonadotropic hormone in the treatment of Habitual Abortion and Endometrial Hyperplasia is discussed. Also the clinical use of Estrogenic hormone in those cases of sterility involving uterine hypoplasia and in the treatment and prevention of premature labor.

2:50—Discussion by C. Frederic Fluhmann, M.D., San Francisco.

3:00—Extra-peritoneal Caesarean Section—W. Dayton Clark, M.D., San Francisco.

Review of thirty cases with discussion of various types and indications therefore; and with special emphasis of anatomical relationships.

3:20—Discussion.

3:30—Chronic Cervicitis in General Practice—Carroll B. Andrews, M.D., Sonoma.

A clinical study of cervical pathosis and symptomatology in patients from adolescence to senescence as seen in a general practice. The relationship to focal infection, dysmenorrhea, menorrhagia, metrorrhagia, sterility and certain abnormalities of the puerperium as well as the effect on hormone balance are discussed. This preliminary paper is an effort to provoke more research in a rather neglected field.

3:50—Discussion by C. Frederic Fluhmann, M.D., San Francisco.

4:00—Gynecography—Moris Horwitz, M.D., and Sidney D. Mesirow, M.D., Beverly Hills.

The authors' method of roentgen diagnosis in gynecology. Indications and contraindications. Numerous roentgenograms of gynecologic pathology visualized by employment of the method will be shown.

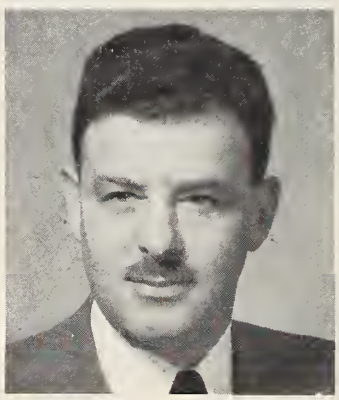
4:20—Discussion.

SECTION ON PATHOLOGY AND BACTERIOLOGY

A. F. Brown, M.D., Glendale, *Chairman*
Gerson R. Biskind, M.D., San Francisco, *Secretary*
C. S. Small, M.D., Loma Linda, *Assistant Secretary*



ALBERT F. BROWN
Chairman
Pathology and Bacteriology



GERSON R. BISKIND
Secretary
Pathology and Bacteriology

Sunday, April 11, 2:00 P.M., Room 261, St. Francis Hotel

2:00—Organisms Isolated from Hairy Tongue—Gilbert D. Curtis, M.D., Glendale, and Thomas Laskaris, Ph.D., Glendale, by invitation.

A cultural study of the organisms associated with the clinical condition known as "Hairy Tongue" has been made. These have been compared with similar organisms isolated from the buccal cavity and from sputum. The relationship of Hairy Tongue to Trichomycosis Asillaris is considered.

2:15—Discussion.

2:25—Results with Cardiolipin Antigen in the Kline Test for Syphilis—Sidney J. Klein, Ph.D., Van Nuys, by invitation, and George M. Leiby, M.D., Van Nuys.

The use of Pangborn's highly purified cardiolipin-lecithin antigen in the slide test affords a simple, reliable test for syphilis. It showed higher sensitivity than the standard Kahn and Kolmer tests, and is recommended as a screen test. The degree of specificity obtained with cardiolipin antigen in tests on over 5,000 non-syphilitic sera approximated results obtained with the Kahn test. In 23 malaria cases the cardiolipin showed much greater specificity than

the Kahn. Tests with antigens containing varying cardiolipin; lecithin ratios showed optimal results with 1 part cardiolipin to 8 parts lecithin. Use of this ratio in testing on over 2,000 non-syphilitic sera gave results showing a specificity of 98.4 per cent and, in the case of Kolmer positive syphilitic sera a sensitivity of 99 per cent.

2:40—Discussion.

2:50—Laboratory Study of Carbohydrate Tolerance in Private Practice—H. R. Fisher, M.D., Los Angeles.

The value of carbohydrate tolerance studies in various diagnostic problems encountered in private practice is reviewed and illustrated. Patients exhibiting increased tolerance form an interesting group; the presentation will include the experience our group has had with this problem, and an outline of the testing methods used for its study.

3:05—The Effect of Intravenously Administered Glucose on the Blood Amylase Values—Reuben Straus, M.D., Beverly Hills.

This study reveals a depression of blood amylase values by intravenously injected glucose. This observation is of practical significance since it is sufficient to mask acute pancreatitis. The observation was made on several cases of acute pancreatitis. An experimental study in vitro and in vivo was also made.

3:20—Hepatic Clearance—A. E. Lewis, M.D., San Francisco.

Specific liver diseases produce specific patterns of dysfunction varying with the stage of the disease. These changes require quantitative evaluation. The following formula was derived for tests based on changes in concentration of intravenously injected substances:

Fraction of fluid vol. cleared = 2.3 (log initial conc.—log final conc.)/time.

3:45—Discussion of papers of Doctors Fisher, Straus, and Lewis by Marcus A. Krupp, M.D., San Francisco, and James Hopper, Jr., M.D., San Francisco.

4:05—Chairman's Address: Laboratory Arithmetic—A. F. Brown, M.D., Glendale.

Numbers may convey information, misinformation, or imagination. Practical aids are offered for reduction of mathematical fiction in laboratory reports.

Monday, April 12, 9:00 A.M., Curran Theater

Joint Meeting with General Medicine, General Surgery, and Radiology

For Program, see Section on General Medicine

Monday, April 12, 2:00 P.M., Room 261, St. Francis Hotel

2:00—The Pathogenesis of Toxoplasmosis—J. K. Frenkel, M.D., San Francisco.

Human cases of toxoplasmosis are being reported with increasing frequency. The causative organism is presumably a protozoan. It is lunate in shape, slightly smaller than a human red blood cell and is characterized by a wide host range. Cases in both humans and animals have been reported from all over the world. This extent of infection, types of infection, clinical signs and symptoms, the pathologic lesions and certain aspects of experimental infection will be discussed.

2:30—Pathological-Clinical Correlations of 150 Cases of Hodgkin's Disease—Warren L. Bostick, M.D., San Francisco.

The pathological material and clinical data from 150 cases of Hodgkin's Disease are reviewed. The diagnosis of, and the possible errors in the proper classification of, the paragranuloma, granuloma and sarcoma variant are discussed. Their clinical characteristics as noted in this series are analyzed. Original sites of onset of the tumors and their presenting signs and symptoms are listed, together with the correlations of ovarian activity and fever type to survival time.

3:00—Observations on 38 Cases of Acute Lymphatic Leukemia in Children—Paul Michael, M.D., Oakland.

A statistical study on thirty-eight case reports of acute lymphatic leukemia occurring in childhood with consideration of the blood picture, physical findings, onset, course and therapy, and postmortem reports on those on whom autopsies were performed.

3:30—Vaginal Smear Technique in the Diagnosis of Uterine Cancer—Virgil O. Parrett, M.D., Los Angeles.

This is a summary report on vaginal cytology as a screening method in the detection of cancer of the female genital organs. For one year routine smears were made on new admissions to the Gyn. Clinic. One thousand of these were surveyed by a repeat clinical examination, smear or biopsy. Cancers were detected by evidence found in smear and the patients referred for study and biopsy. These 1,000 cases were selected from a group of about 5,000 less well controlled. Conclusions: (1) Vaginal cytology methods constitute a good screening test; (2) Cytology studies are an accurate exclusion method in ruling out cancer of the genital organs; and (3) As a diagnostic procedure, the method is less accurate.

4:00—Business Meeting and Election of Officers.

SECTION ON PEDIATRICS

C. I. Mead, M.D., Bakersfield, *Chairman*
Alice Potter, M.D., San Francisco, *Secretary*
Carl A. Erickson, M.D., Pasadena, *Assistant Secretary*



C. I. MEAD
Chairman, Pediatrics



ALICE POTTER
Secretary, Pediatrics

Sunday, April 11, 2:00 P.M., Room 210, St. Francis Hotel

2:00—Congenital Atresia—J. Norton Nichols, M.D., Los Angeles.

A brief resume of the etiological and surgical history is followed by a discussion of the writer's results obtained in 30 operative cases. The opportunity for early diagnosis usually rests with the obstetrician or pediatrician. Pathology and surgical technique are illustrated by lantern slides.

2:15—Discussion.

2:30—Intestinal Obstruction in the Newborn—Albert G. Clark, M.D., San Francisco.

Discussion of diagnostic difficulties in intestinal obstruction of the newborn.

2:45—Discussion by John M. Moore, M.D., San Francisco.

3:00—Megacolon—Louise A. Yeazell, M.D., San Francisco.

Medical and surgical management of a group of children with congenital megacolon at U. C. Hospital.

3:20—Discussion.

3:30—Recess.

3:40—Physiology and Surgical Treatment of Patent Ductus Arteriosus—Emile F. Holman, M.D., San Francisco.

A review of the pathologic physiology of the patent ductus and of the indications and technique for its ligation with a presentation of representative cases.

4:00—Discussion by Ann P. Purdy, M.D., San Francisco.

4:10—Anesthesia in Children—Dorothy A. Wood, M.D., San Mateo.

A consideration of the management, medication and methods employed in the more or less "routine" surgical procedures such as tonsillectomy, herniaplasty and appendectomy. Use of nitrous oxide oxygen for dental extraction in children.

4:30—Discussion.

Monday, April 12, 9:00 A.M., Room 210, St. Francis Hotel

Panel Discussion on "What's New in Pediatrics"

Moderator: Paul Hamilton, M.D., San Marino

9:00—Allergy—William C. Deamer, M.D., San Francisco.

9:10—Infectious Diseases—Edward B. Shaw, M.D., San Francisco.

9:20—Pancreatic Disease—Gordon E. Gibbs, M.D., San Francisco, by invitation.

9:30—Care of Prematures—Jerome Mark, M.D., Los Angeles.

9:40—Treatment of Erythroblastosis — Herman Kirchdoerfer, M.D., Pasadena.

9:50—Nutritional Anemia—Paul Sturgeon, M.D., Los Angeles, by invitation.

10:00—Diagnosis of Anemias—Leon Oettinger, M.D., Los Angeles, by invitation.

10:10—Recess.

10:20—Immunization—John J. Miller, M.D., San Francisco.

10:30—Acute Infectious Lymphocytosis—Frank Plachte, M.D., Los Angeles, by invitation.

10:40—Diagnosis of Patent Ductus Arteriosus—Saul Robinson, M.D., San Francisco.

10:50—Treatment of Metatarsus Varus—Frances Baker, M.D., San Francisco.

11:00—Questions, in writing, to be passed to Moderator, who will distribute to members of the panel.

11:30—Business Meeting and Election of Officers.

Monday, April 12, 2:00 P.M.

Joint Meeting with Sections on General Medicine, General Practice, and Urology

SECTION ON PUBLIC HEALTH

Harold D. Chope, M.D., Stockton, *Chairman*
Malcolm H. Merrill, M.D., Berkeley, *Vice-Chairman*
Edward Lee Russell, M.D., Santa Ana, *Secretary*



HAROLD D. CHOPE
Chairman, Public Health



EDWARD LEE RUSSELL
Secretary, Public Health

Sunday, April 11, 2:00 P.M., Curran Theater

Joint Session with Sections on General Medicine, General Surgery, General Practice and Obstetrics and Gynecology

For Program, see Section on General Medicine

Monday, April 12, 9:00 A.M., Borgia Room, St. Francis Hotel

9:00—Chairman's Address: Where Were You in 1928?—Harold D. Chope, M.D., Stockton.

This paper compares the status of public health work in California in 1928 and 1948 and attempts to summarize the progress made in two decades. Possible fields of accomplishments for the future are outlined and the contribution of medicine and public health to the improvement of human welfare is discussed.

9:20—Report of an Outbreak of Ringworm of the Scalp Due to M. Audouini—Roy O. Gilbert, M.D., Los Angeles.

A description of our survey of a school population in which we suspected the presence of M. audouini infection, including the techniques employed in the survey, diagnostic and confirmatory procedures, and methods of control. Correlation of the fact-finding data of our work with that of other work in adjacent areas.

9:40—Educational Programs for Food Handlers and Their Relationship to the Control of Communicable Diseases—Carl J. Hawley, M.D., Los Angeles, and T. Ross Williams, B.S., Los Angeles, by invitation.

For five years the Los Angeles City Health Department has conducted educational programs for members of the food industry. Food handlers are taught the means by which food may become contaminated or infectious, and the necessity for appropriate ordinances and laws. Citations to the City Attorney for sanitary violations and the incidence of food poisoning has been reduced. No significant reduction in other enteric infections, the rickettsial or upper respiratory infections.

10:00—Business Recess. Election of Officers.

10:20—Problems in Radiological Interpretation and Their Implications in Mass X-Ray Survey—Jacob Yerushalmy, Ph.D., Berkeley, by invitation.

Recent comparative x-ray studies demonstrate: (1) Photofluorography is a relatively efficient tool for tuberculosis case finding. (2) All photofluorograms should be interpreted independently by two competent interpreters. (3) The activity of a lesion can not be determined from a single roentgenogram. Hence, intensive follow-up is indicated for all cases.

10:40—The Use of Miniature Film as a Diagnostic Technique in Heart Disease—William Paul Thompson, M.D., Los Angeles, and Joseph Jellen, M.D., Los Angeles.

Cardiac measurement is possible and distortions of shape are reproduced in miniature films. New cases of cardiac disease may be found by this radiologic method, but many cases will be overlooked unless the technique is broadened to include history, physical examination and electrocardiogram.

11:00—Discussion by Howard F. West, M.D., and L. Henry Garland, M.D., San Francisco.

Tuesday, April 13, 9:00 A.M., Rooms 214-217, St. Francis Hotel

Joint Meeting with General Practice

9:00—The "Laboratory" in the Diagnosis of Communicable Diseases—Malcolm H. Merrill, M.D., Berkeley.

The place of the "laboratory" in the diagnosis of such communicable diseases as typhoid, syphilis, diphtheria, and viral and rickettsial diseases will be reviewed. The type of specimens to be submitted and where they may be sent in California will be noted. Common errors in the use of available laboratory services will be pointed out. (Editorial note: Does the author mean *clinical pathologist?*)

9:20—Discussion by A. G. Foord, M.D., Pasadena.

9:30—Q Fever in California—Edwin H. Lennette, M.D., Berkeley, by invitation.

The history of Q fever is briefly summarized. Observations made on an outbreak of the disease which occurred in California in 1947 are presented, and the etiology, epidemiology, symptomatology, and diagnosis are discussed.

9:50—Discussion.

10:00—A General Practitioner Looks at the Health Department—Roswell L. Hull, M.D., Hollister.

The increasing importance of general practice and public health during the last decade. The development of better medical standards and care through cooperation. What the general practitioner should expect of public health and his failure at times to support and understand the modern public health program. Consequences of a failure thereof.

10:20—Discussion.

10:30—Practical Aspects of Electrocardiography—Francis Chamberlain, M.D., San Francisco.

11:00—Discussion.

11:10—Diabetes, Control Objectives—Hugh L. Wilkerson, M.D., Boston, Mass.

11:30—Discussion.

Tuesday, April 13, 1:15 P.M., Empire Room,
Sir Francis Drake Hotel
Joint Meeting with General Medicine
For Program, see Section on General Medicine

SECTION ON RADIOLOGY

Douglass R. MacColl, M.D., Los Angeles, *Chairman*
Sydney F. Thomas, M.D., Palo Alto, *Secretary*



DOUGLASS R. MacCOLL
Chairman, Radiology



SYDNEY F. THOMAS
Secretary, Radiology

Sunday, April 11, 2:00 P.M., Borgia Room,
St. Francis Hotel

2:00—**The Use of the Rapid Film Changer in Vascular Disorders and the Recording of Rapid Physiological Movements**—Charles Duisenberg, M.D., San Francisco, by invitation.

The rapid film changer has been used primarily in angiocardiography. Little use has been made of its principles in contrast visualization of peripheral blood vessels, cerebral angiography, aortography, arterio-venous fistulas, and for the recording of rapid movements of hollow organs. Examples are shown of the advantages of using the film changer, instead of single or a few exposures for the demonstration of systems and conditions described above.

2:20—Discussion by Earl R. Miller, M.D., San Francisco.

2:30—Spontaneous Pneumoperitoneum—Walter Stilson, M.D., and Otto Neufeld, M.D., Los Angeles.

Brief review of literature on spontaneous pneumoperitoneum, especially idiopathic. Etiology and clinical significance; x-ray findings with special attention to those associated with massive pneumoperitoneum. Another case of spontaneous pneumoperitoneum without demonstrable cause will be added to the literature of the few previously reported cases.

2:50—Discussion by L. Henry Garland, M.D., San Francisco.

3:00—Myclography, An Evaluation—Charles Grayson, M.D., and Howard Black, M.D., Sacramento.

The value and accuracy of myelography in herniated disc is discussed and illustrated by a number of examples.

3:20—Discussion by James Irwin, M.D., San Diego.

3:30—**The Significance of the Electrokymograph**—Frederick G. Gillick, M.D., and William F. Reynolds, M.D., San Francisco, by invitation.

The electrokymograph records on ECG paper by means of a multiplier photo-tube, galvanometer, and camera the variations in intensity of an x-ray beam falling on a strip of fluorescent screen. Characteristics of motion and density variations of certain organs, such as the heart, etc. can be recorded for subsequent analysis. Other normal and abnormal areas in the body may be similarly studied. The instrument is described and the mechanism of the production of the records is discussed. Possible errors in interpretation are indicated.

3:50—Discussion by S. F. Thomas, M.D., Palo Alto.

4:00—Recess: Business Meeting and Election of Officers.

4:10—**Dysplasia of the Hip: A Factor in the Development of Static Osteoarthropathy**—Joseph Levitin, M.D., San Francisco.

In dysplasia of the hip, there is a shallow acetabulum. The extreme of this flattening results in a congenital dislocation. There is a genetic background. The changes that occur in the femoral head and neck are often misdiagnosed as an end result of an old epiphyseal slip or Perthes'. The flattened acetabulum gives a poor structural hip. Stress micro-trauma may result in osteoarthropathy.

4:30—Discussion by A. A. de Lorimer, M.D., San Francisco.

Monday, April 12, 9:00 A.M., Curran Theater

Joint Meeting with Sections on General Medicine, General Surgery, and Pathology

For Program, see Section on General Medicine

Monday, April 12, 2:00 P.M., Borgia Room, St. Francis Hotel

2:00—Rheumatoid Spondylitis—A. Justin Williams, M.D., San Francisco.

Presentation of the early "characteristic" x-ray findings with particular reference to the changes in the costal articulations and their possible causation of thoracic and abdominal symptomatology. Discussion of the technical procedures necessary for satisfactory demonstration of these joints.

2:20—Discussion by Edward W. Boland, M.D., Los Angeles.

2:30—Roentgen Therapy of Rheumatoid Spondylitis—Nathan M. Spishakoff, M.D., San Francisco.

Presentation of the treatment method of rheumatoid spondylitis, as developed at U. C. Hospital, with a discussion of physical factors, indications, contraindications, complications, and results obtained in the series of cases treated since 1943.

2:50—Discussion by Hans Waine, M.D., San Francisco.

3:00—Treatment of Tinea Capitis—Harold A. Hill, M.D., and Martha E. Mottram, M.D., San Francisco.

The authors discuss methods of roentgen therapy for tinea capitis. They outline a relatively simple method of treatment and compare their results with those obtained by more elaborate techniques. They summarize the results in over one hundred cases. The absence of complications on follow-up is stressed. (Lantern Slides.)

3:20—Discussion by H. V. Allington, M.D., Oakland.

3:40—Radiation Lesions of the Bowel—Ralph F. Niehaus, M.D., and M. D. Redding, M.D., San Diego.

Review of 98 cases of carcinoma of the cervix seen 1943 through 1946. Clinical, pathologic, protoscopic, and roentgen appearance of both early and late radiation lesions of the bowel are described. (Lantern and Kodachrome slides.) Treatment and differential diagnosis will be discussed.

4:00—Discussion by William E. Costolow, M.D., Los Angeles.

4:10—Recess—Meeting of Pacific Roentgen Ray Society.

SECTION ON UROLOGY

Lionel P. Player, M.D., San Francisco, *Chairman*
Nathan G. Hale, M.D., Sacramento, *Vice-Chairman*
Frederick A. Bennetts, M.D., Los Angeles, *Secretary*



LIONEL P. PLAYER
Chairman, Urology



FREDERICK A. BENNETTS
Secretary, Urology

Monday, April 12, 9:00 A.M., Franciscan Room, Sir Francis Drake Hotel

9:00—Common Skin Diseases of the External Genitalia—Julius H. Winer, M.D., and Louis H. Winer, M.D., Beverly Hills.

9:20—Discussion by Rees B. Rees, M.D., San Francisco.

9:30—Diagnosis and Management of Acute Scrotal Enlargements—Lloyd R. Reynolds, M.D., Thomas L. Schulte, M.D., and Howard J. Hammer, M.D., San Francisco.

9:50—Discussion by Lyle G. Craig, M.D., Pasadena.

10:00—A Surgical Approach to the Problem of Intractable Incontinence in the Female—Milton O. Zucker, M.D., and Lysle O. Shaw, M.D., South Gate.

A new approach to the problem of intractable incontinence in the female, based on the development of a "pseudo" urethral tube fashioned from a tongue of bladder tissue and covered by full thickness abdominal wall graft, by closure of a natural urethral orifice.

10:20—Discussion by R. Glenn Craig, M.D., San Francisco.

10:30—Tumors of the Spermatic Cord—Presentation of Two Cases—Jesse L. Brockow, M.D., and Glen H. Gummess, M.D., Los Angeles.

Two cases, one primary mesothelioma of the spermatic cord, and the other a teratoma of the cord and testicle. The primary site was not determined, but the case is presented because of its unusual spread.

10:50—Discussion by Jay J. Crane, M.D., Los Angeles.

11:00—Reno-Colic Fistula—H. Verrill Findlay, M.D., Santa Barbara.

11:20—Discussion by Frank Hinman, M.D., San Francisco.

11:30—Urethral Diverticulum in Women—Case Report—Harry A. Zide, M.D., Beverly Hills.

Treatment consists of excising the diverticulum with contained calculi, which usually cures not only the diverticulum, but also the associated urinary infection.

11:50—Discussion by Dudley P. Fagerstrom, M.D., San Jose.

Monday, April 12, 2:00 P.M., Curran Theater

Joint Meeting with Sections on General Practice, Pediatrics, and General Medicine

For Program, see Section on General Medicine

Tuesday, April 13, 9:00 A.M., Empire Room, Sir Francis Drake Hotel

9:00—Operation for Hypospadias with Moving Picture Demonstration—Arthur B. Cecil, M.D., Los Angeles.

9:40—Discussion by Donald R. Smith, M.D., San Francisco.

10:00—Radium as an Adjunct, in the Transurethral Treatment of Cancers of the Prostate and Bladder—James R. Dillon, M.D., San Francisco.

A radium holding catheter was devised 25 years ago, recently modified and improved by Dr. Ford Shepard and later by Dr. C. E. Duisenberg. Brief summary of cases illustrative of its use, benefits and dangers.

10:20—Discussion by Lloyd Kindall, M.D., Oakland.

10:30—Non-Surgical Treatment of the Patient with Mild Prostatism—Roger W. Barnes, M.D., Los Angeles, and Claire E. Heitman, M.D., Los Angeles, by invitation.

10:50—Discussion by Edward W. Beach, M.D., Sacramento.

11:00—Dietary and Occupational Considerations in the Treatment of Urogenital Disorders—Carl E. Burkland, M.D., Sacramento.

A discussion of different dietary measures as adjuncts in the treatment of irritative and inflammatory conditions of the urogenital tract and in the prevention of the recurrence of urinary calculi.

11:20—Discussion by Henry M. Weyrauch, Jr., M.D., San Francisco.

Tuesday, April 13, 1:30 P.M., Green Room, St. Francis Hotel

1:30—Chairman's Address—Lionel P. Player, M.D., San Francisco. Presentation of 21-Year-Old Male, 17 Years After Removal of Malignant Adrenal Tumor Which Had Caused Sexual Precocity.

Comments by Hans Lisser, M.D., San Francisco, at request of Chairman.

Sexual precocity in boys falls into three categories: (1) Hereditary transmission; (2) Following measles, mumps, whooping cough, encephalitis—in the region of the fourth ventricle; and (3) Of endocrine origin; due to lesion, tumor of either adrenal cortex, testicle, or pineal gland.

2:15—Discussion.

2:30—Business Recess.

2:40—Business Meeting and Election of Officers.

Wednesday, April 14, 2:00 P.M., Green Room, St. Francis Hotel

2:00—Malignancy of the Improperly Descended Testicle—Frederick C. Schlumberger, M.D., Beverly Hills.

Two cases are described in which carcinoma of the testicle developed following surgical correction of the malposition. A brief resume of the case records of several patients with the diagnosis of Improperly Descended Testicle and Tumors of the Testicle. Re-evaluation of the management of this condition.

2:20—Discussion by Thomas Gibson, M.D., San Francisco.

2:30—Essential Hypertension Associated with Unilateral Renal Disease. A Report of Four Cases—McCleery Glazier, M.D., Los Angeles, and James Whisenand, M.D., Los Angeles, by invitation.

Theories of the mechanism of essential hypertension with particular reference to the renal influences in the production of this disease. Four cases of essential hypertension associated with unilateral renal disease.

2:50—Discussion by William J. Kerr, M.D., San Francisco.

3:00—Streptomycin in Treatment of Tuberculosis and Mixed Infections of the Genito-Urinary Organs—Francis H. Redewill, M.D., San Francisco, and James E. Potter, M.D., Palm Springs.

A report of twenty-one cases. (Lantern Slides.)

3:20—Discussion by Gilbert J. Thomas, M.D., Beverly Hills.

3:30—Bilateral Renal Calculi—Clyde W. Collings, M.D., Los Angeles, and Ivan E. Martin, M.D., Los Angeles, by invitation.

A review of results during the past decade in dealing with this perplexing problem at Medical School, College of Medical Evangelists. Elective surgery and conservative treatment will be discussed.

3:50—Discussion by Roger W. Barnes, M.D., Los Angeles, and Robert J. Prentiss, San Diego.

4:00—Cyst of the Seminal Vesical—B. Lyman Stewart, M.D., and Gordon A. Nicoll, M.D., Los Angeles.

The origin, pathology, symptoms and treatment is described with a brief summary of the current literature. A case report is presented illustrating certain features of the symptoms, diagnosis and treatment.

4:20—Discussion.

INDEX TO SPEAKERS

San Francisco, April 11-14, 1948

Name and City — *Page*

A

Addis, Thomas, *San Francisco* 200
Aird, Robert B., *San Francisco* 210
Anderson, Frank M., *Los Angeles* 210
Andrews, Carroll B., *Sonoma* 199, 212

B

Bailey, Wilbur, *Los Angeles* 199
Baker, Frances, *San Francisco* 214
Ball, Howard A., *San Diego* 199
Barkan, Otto, *San Francisco* 207
Barnes, Roger W., *Los Angeles* 218
Beard, Crowell, *San Jose* 207
Bell, T. Floyd, *Oakland* 212
Belt, Elmer, *Los Angeles* 203
Berne, Clarence J., *Los Angeles* 202
Bettman, Jerome W., *San Francisco* 207
Bierman, Howard R., *San Francisco* 202
Black, Howard A., *Sacramento* 216
Bostick, Warren L., *San Francisco* 213
Bourne, Wesley, *Montreal, Canada* 199, 205
Bower, Albert G., *Pasadena* 199
Brockow, Jesse L., *Los Angeles* 217
Brown, A. F., *Glendale* 213
Burkland, Carl E., *Sacramento* 218

C

Carey, Hollis L., *Gridley* 204
Carr, Jesse L., *San Francisco* 208
Cattell, Richard B., *Boston, Massachasetts* 199, 201
Cecil, Arthur B., *Los Angeles* 218
Chamberlain, Francis, *San Francisco* 216
Charnock, Donald A., *Los Angeles* 201
Cheney, Garnett, *San Francisco* 199
Chope, Harold D., *Stockton* 215
Clark, Albert G., *San Francisco* 214
Clark, W. Dayton, *San Francisco* 212
Cline, John W., *San Francisco* 199
Cohn, Julian, *Los Angeles* 201
Collings, Clyde W., *Los Angeles* 218
Collins, Donald C., *Los Angeles* 208
Curtis, Gilbert D., *Glendale* 212

D

Dailey, Morris E., *San Francisco* 200
Darley, Ward, *Denver, Colorado* 199
Davis, Edward W., *San Francisco* 203
Davis, Fenimore, *Oakland* 205
Deamer, William C., *San Francisco* 208, 214
Debenham, Martin W., *San Francisco* 209
Dietrich, Harry F., *Beverly Hills* 200
Dillon, James R., *San Francisco* 218
Downing, F. Harold, *Fresno* 208
Duggan, William T., *San Francisco* 207
Duisenberg, Charles, *San Francisco* 216
Duncan, Herbert A., *Pasadena* 210
Durfee, Raphael B., *San Francisco* 212
Duschkin, Miriam, *San Francisco* 201

E

Evans, Robert S., *San Francisco* 201

F

Falconer, Ernest H., *San Francisco* 202
Farber, Seymour M., *San Francisco* 201
Findlay, H. Verrill, *Santa Barbara* 218
Fisher, H. R., *Los Angeles* 213
Foord, Alvin G., *Pasadena* 199
Frenkel, J. K., *San Francisco* 213
Frost, John K., *San Francisco* 201

G

Gardner, Kenneth Drake, *San Francisco* 203
Gibbs, Gordon E., *San Francisco* 214
Gilbert, Roy O., *Los Angeles* 215
Gill, Richard C., *Palo Alto* 204
Gillick, Frederick, *San Francisco* 216
Glazier, McCleery, *Los Angeles* 218
Gliebe, Paul A., *San Francisco* 210
Goeckerman, William H., *Los Angeles* 206
Goin, Lowell S., *Los Angeles* 199
Goldman, Leon, *San Francisco* 210
Golseth, James G., *Los Angeles* 210
Goodhill, Victor, *Los Angeles* 208
Gray, Percival A., *Santa Barbara* 200
Grayson, Charles, *Sacramento* 216
Gummess, Glen H., *Los Angeles* 217

H

Hammer, Howard J., *San Francisco* 217
Harding, William F. B., *San Francisco* 206
Harrington, David O., *San Francisco* 206
Harrington, Donald C., *Stockton* 202
Hattersley, Paul G., *San Francisco* 201
Hawley, Carl J., *Los Angeles* 215
Heitman, Claire, *Los Angeles* 218
Henry, Randall, *San Francisco* 206
Hill, Harold A., *San Francisco* 217
Hinton, J. William, *New York, N. Y.* 199, 203
Holman, Emile F., *San Francisco* 214
Homann, Ralph E., *Los Angeles* 201
Horwitz, Moris, *Beverly Hills* 212
Huddleston, O. Leonard, *Los Angeles* 210
Hull, Roswell, *Hollister* 215

J

Jellen, Joseph, *Los Angeles* 215
Johnstone, Rutherford T., *Los Angeles* 209

K

Kahler, James E., *Los Angeles* 199
Kirby, William M. M., *San Francisco* 199
Kirchdoerfer, Herman, *Pasadena* 214
Klein, Sidney, *Van Nays* 212

L

Laskaris, Thomas, *Glendale* 212
Leggo, Christopher, *Crockett* 208
Leiby, George M., *Van Nays* 212
Leigh, Digby, *Vancoaver, Canada* 204
Lennette, Edwin, *Berkeley* 215
Levitin, Joseph, *San Francisco* 216
Lewis, Alvin E., *San Francisco* 213

Name and City	Page
Lindsay, Stuart, *San Mateo*	200
Lisser, Hans, *San Francisco*	218
Loutzenheiser, John J., *San Francisco*	203
Lucia, Salvatore P., *San Francisco*	202
Lull, George F., *Chicago*	199
Lyons, Harold M., *San Francisco*	211
Lyttle, John D., *Los Angeles*	201

M

MacKay, Eaton M., *La Jolla*	199
Mark, Jerome S., *Los Angeles*	214
Martin, Ivan E., *Los Angeles*	218
McCann, William S., *Rochester, N. Y.*	199
McCarty, Ray B., *Riverside*	200
McClendon, Sam J., *San Diego*	203
McNeil, Donald, *Sacramento*	209
Meadoff, Nathan, *Bakersfield*	209
Merrill, Malcolm H., *Berkeley*	215
Mesirow, Sidney, *Beverly Hills*	212
Michael, Paul P., *Oakland*	213
Michelson, Henry E., *Minneapolis, Minnesota*	199, 205
Miller, John J., *San Francisco*	214
Minsky, Henry, *New York, N. Y.*	207
Morrison, Lewis F., *San Francisco*	207
Morton, Daniel, *San Francisco*	200
Mottram, Martha E., *San Francisco*	217
Murphy, Frank J., *San Francisco*	204
Myers, Orris R., *Eureka*	209

N

Nelson, Lawrence M., *Santa Barbara*	205
Neufeld, Otto, *Los Angeles*	216
Nichols, J. Norton, *Los Angeles*	214
Nicoll, Gordon A., *Los Angeles*	218
Niehaus, Ralph F., *San Diego*	217
Norcross, Nathan, *Oakland*	211

O

Obermayer, Maximilian E., *Los Angeles*	206
Oettinger, Leon, *Los Angeles*	214
O'Farrell, Norman M., *San Diego*	206

P

Page, Ernest W., *Berkeley*	212
Parker, Leon O., *San Francisco*	209
Parrett, Virgil O., *Los Angeles*	213
Pattison, Arthur C., *Pasadena*	203
Pillsbury, Stirling G., *Long Beach*	211
Plachte, Frank, *Los Angeles*	214
Player, Lionel P., *San Francisco*	218
Posner, Charles, *Pasadena*	211
Potter, James E., *Palm Springs*	218
Prinzmetal, Myron, *Beverly Hills*	201

R

Redding, M. D., *San Diego*	217
Redewill, Francis H., *San Francisco*	218
Rees, Charles W., *San Diego*	206
Reynolds, Lloyd R., *San Francisco*	217
Reynolds, William F., *San Francisco*	216
Rice, Arthur H., *Berkeley*	207
Robinson, Saul, *San Francisco*	214
Robson, George B., *San Francisco*	199
Rushton, Joseph G., *Los Angeles*	210
Rytand, David A., *San Francisco*	201

S

Sampson, John J. *San Francisco*	200
Schaefer, Jane, *San Francisco*	211
Schlumberger, Frederick C., *Beverly Hills*	218
Scholtz, Julius R., *Los Angeles*	206
Schulte, Thomas L., *San Francisco*	217
Sensiba, Seth W., *Santa Monica*	205
Shaw, Edward B., *San Francisco*	211, 214
Shaw, Lysle O., *Soath Gate*	217
Skaggs, Marshall L., *San Francisco*	205
Smyth, Francis S., *San Francisco*	201
Sooy, Francis A., *San Francisco*	206
Spishakoff, Nathan M., *San Francisco*	217
Sprinz, Helmuth, *San Francisco*	199
Starr, Paul, *Pasadena*	201
Sternberg, Thomas H., *Los Angeles*	204
Stewart, B. Lyman, *Los Angeles*	218
Stilson, Walter, *Los Angeles*	216
Stratton, Ernest K., *San Francisco*	206
Straus, Reuben, *Los Angeles*	213
Sturgeon, Paul, *Los Angeles*	214

T

Tainter, Maurice L., *Rensselaer, N. Y.*	204
Thompson, Richard, *San Francisco*	205
Thompson, William Paul, *Los Angeles*	215
Thorn, George W., *Boston Massachasetts*	199, 201
Toffelmier, Douglas D., *Berkeley*	209
Trowbridge, Dwight, *Fresno*	207
Truman, Stanley R., *Oakland*	204

W

Warnock, Ernest H., *Los Angeles*	204
Wartenberg, Robert, *San Francisco*	211
Webb, Eugene McDaniel, *San Francisco*	203
Wegrocki, Henry J., *Los Angeles*	210
West, Howard F., *Los Angeles*	199
Whisenand, James, *Los Angeles*	218
Wilhelm, Louis F. X., *Los Angeles*	206
Wilkerson, Hugh L., *Boston, Massachusetts*	216
Williams, A. Justin, *San Francisco*	217
Williams, T. Ross, *Los Angeles*	215
Williamson, Craig, *Los Angeles*	206
Winer, Julius H., *Beverly Hills*	217
Winer, Louis H., *Beverly Hills*	217
Wood, Dorothy A., *San Mateo*	214

Y

Yeazell, Louise A., *San Francisco*	214
Yerushalmy, Jacob, *Berkeley*	215

Z

Zidě, Harry A., *Beverly Hills*	218
Ziskind, Eugene, *Los Angeles*	210
Zucker, Milton O., *South Gate*	217

C. M. A. Cancer Commission

Pre-Convention Conference

MARK HOPKINS HOTEL

APRIL 10, 1948

The preconvention conferences sponsored by the Cancer Commission will be held at the Mark Hopkins Hotel on April 10, on the day preceding the opening of the California Medical Association meeting.

PATHOLOGY. Golden Empire Room

The preconvention conference on Histopathology will be held from 9 a.m. to 4 p.m. under the chairmanship of Dr. Ernest M. Hall. Tumor diagnostic problems will be presented and discussed. Members who will attend this conference are requested to bring their own microscopes and to register now with Dr. Warren Bostick, U. C. Hospital, San Francisco 22.

RADIOLOGY. Argonaut Room

The preconvention conference on Radiology will be held at 9:30 a.m. The chairman of this section is Dr. Albert K. Merchant, Dameron Hospital, Stockton. The secretary is Dr. Henry L. Jaffee. Beverly Hills.

EVENING CONFERENCE

The Cancer Commission Dinner will be held at 6:30 p.m., at the Mark Hopkins Hotel, for members of the Cancer Committees of the County Medical Societies. Interested physicians are invited. Make reservations with Dr. O. N. Meland, 1407 S. Hope Street, Los Angeles, or Dr. David A. Wood, 54 Commonwealth Avenue, San Francisco. $5.00 per plate.

Immediately following the dinner there will be a Clinical Conference with presentation of patients before a "Model Tumor Board." Dr. James M. Marshall, Pasadena, is chairman, and Dr. Otto Pflueger, San Francisco, is secretary. Dr. Marshall has selected the members for the Consultative Tumor Board.

California Heart Association

ANNUAL MEETING

Marine Memorial Theater, Mason and Sutter Streets

Tuesday Afternoon, 2.00 P.M., April 14, 1948

Presiding: Samuel J. McClendon, M.D., President, California Heart Association, and Francis L. Chamberlain, M.D., Chairman, Program Committee

Panel Discussion: Recent Advances in Treatment and Diagnosis of Heart Disease

2:00—Recent Advances in Treatment of Hypertension—William Paul Thompson, M.D., Los Angeles.

2:08—Recent Advances in Treatment of Coronary Disease—John J. Sampson, M.D., San Francisco.

2:16—Recent Advances in Treatment of Rheumatic Fever—George C. Griffith, Pasadena.

2:24—Recent Advances in Treatment of Peripheral Vascular Disease—Norman Freeman, M.D., San Francisco.

2:32—Recent Advances in Surgical Treatment of Heart Disease—John C. Jones, M.D., Los Angeles.

2:40—Recent Advances in Treatment of Bacterial Endocarditis and Luetic Cardiovascular Disease—Salvatore P. Lucia, M.D., San Francisco.

2:45—Recent Advances in Electrocardiography—Hans Hecht, M.D., Salt Lake City, Utah.

2:55—Recent Advances in Diagnosis and Treatment of Functional Heart Disease—Meyer Friedman, M.D., San Francisco.

3:00—Discussion by members of panel of questions submitted in writing from the floor.

3:20—Five-minute intermission.

3:25—A Correlation Between the Pathological and Electrocardiographic Findings in 256 Cases of Fatal Acute Myocardial Infarction—Willard J. Zinn, M.D., and Richard S. Cosby, M.D., Los Angeles.

Concepts of Myocardial Ischaemia—Hans Hecht, M.D., Salt Lake City, Utah.

A Statistical Study of the Etiology and Pathology of 127 Cases of Cor Pulmonale Studied at Autopsy—Sim P. Dimitroff, M.D., Los Angeles.

Practical Value of Determining Propagation of Heart Sounds—William J. Kerr, M.D., San Francisco.

An Analysis of the First Heart Sound in Auricular Fibrillation—David Rytand, M.D., San Francisco.

Evaluation of the Hypertensive Patient—Maurice Sokolow, M.D., San Francisco.

5:15—Annual Business Meeting.

California Society of Internal Medicine

ANNUAL MEETING

5 o'clock, Tuesday, April 13

Empire Room, Sir Francis Drake Hotel

Discussion of the fee schedule questionnaire and election of officers

Western Association of Industrial Physicians and Surgeons

SEVENTH ANNUAL MEETING

The Gold Room, Fairmont Hotel

San Francisco, California

Saturday, April 10, 1948

Annual Business Meeting (members)

8:30-9:00 a.m.

PROGRAM

9:00-9:30 a.m.—President's Address—Dr. William P. Shepard, Third Vice-President, Metropolitan Life Insurance Company, San Francisco, California.

9:30-10:00 a.m.—"Industrial Hygiene and Medicine, Tomorrow Measured By Today"—Dr. Richard C. Walmer, Medical Director, Industrial Hygiene Foundation, Pittsburgh, Pa.

10:00-10:30 a.m.—"The Contribution of the Sciences to Industrial Medicine and Hygiene"—Dr. Francis R. Holden, Research Associate, Radiation Laboratory, U. S. Navy, San Francisco, California, formerly Chief Chemist, Industrial Hygiene Foundation.

10:30-11:00 a.m.—Discussion period for previous three papers.

11:00-12:00 a.m.—"Problems Relative to Possible Physiological Effects Caused by Radiation"—Dr. Fred A. Bryan, associated with the Atomic Energy Project, University of California at Los Angeles, formerly active in the Medical Division of the Manhattan Project. (Accompanied by new sound color film, "Operation Crossroads—Radiological Safety Section."

2:00-2:30 p.m.—"The Doctor's Office in Accident Prevention"—H. K. Lambie, El Cerrito, California, Safety Consultant.

2:30-3:00 p.m.—"Industrial Nursing Today, An Evaluation"—Mrs. Roberta McMahon, R.N., Eitel-McCullough Company, San Bruno, California.

3:00-5:00 p.m.—Symposium—A panel with audience participation discussing the State Compensation Insurance Law, its administration, its procedures, and problems connected therewith.

President, William P. Shepard, M.D.
c/o Metropolitan Life Insurance Co.
600 Stockton Street
San Francisco 20, California

Secretary, Christopher Leggo, M.D.
c/o C&H Sugar Refining Corp., Ltd.
Crockett, California

ROOM	SUNDAY APRIL 11		MONDAY APRIL 12		TUESDAY APRIL 13		WEDNESDAY APRIL 14	
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
CURRAN THEATER	**10:00** General Meeting	**2:00** General Medicine General Surgery General Practice Obstetrics and Gynecology Public Health	**9:00** General Medicine General Surgery Pathology and Bacteriology Radiology	**1:40** General Medicine General Practice Pediatrics Urology	**9:00** General Meeting and Clinical Pathological Conference	**2:00** General Surgery General Practice Industrial Medicine and Surgery Neuropsychiatry	**9:00** General Meeting "What's New"	
ST. FRANCIS HOTEL Green Room		**2:00** Industrial Medicine and Surgery	**9:00** Industrial Medicine and Surgery	**2:00** Eye, Ear, Nose and Throat	**9:00** Eye, Ear, Nose and Throat	**1:30** Urology		**2:00** Urology
Borgia Room		**2:00** Radiology	**9:00** Public Health	**2:00** Radiology	**9:30** Dermatology and Syphilology	**2:00** Dermatology and Syphilology Eye. Ear, Nose and Throat	**9:00** Dermatology and Syphilology	
Rooms 214-217		**2:00** Neuropsychiatry		**2:00** Neuropsychiatry	**9:00** General Practice Public Health			
Room 261		**2:00** Pathology and Bacteriology	**9:00** Obstetrics and Gynecology	**2:00** Pathology and Bacteriology		**2:00** Obstetrics and Gynecology		
Room 210		**2:00** Pediatrics	**9:00** Pediatrics	**2:00** Anesthesiology	**11:00** Anesthesiology			
Room 220		**1:30** Anesthesiology						
SIR FRANCIS DRAKE HOTEL Empire Room			**9:00** General Practice		**9:00** Urology	**1:15** General Medicine and Public Health		**2:00** Postgraduate Training and Medical Economics
Franciscan Room			**9:00** Urology					

HOUSE OF DELEGATES MEETS SUNDAY AND TUESDAY AT 6:30 P.M. IN THE EMPIRE ROOM, HOTEL SIR FRANCIS DRAKE
COUNCIL OF THE C.M.A. MEETS DAILY AT 7.30 A.M. IN ROOM 220, HOTEL ST. FRANCIS

WOMAN'S AUXILIARY

to the

CALIFORNIA MEDICAL ASSOCIATION

EIGHTEENTH ANNUAL CONVENTION

Headquarters, Mark Hopkins Hotel



MRS. NORMAN D. MORGAN
President



MRS. LAWRENCE GUNDRUM
President-Elect

Convention Chairman, MRS. KEENE O. HALDEMANN

REGISTRATION

Sunday, April 11, 9:30-12 noon, 2:30 p.m.-4:00 p.m.

Monday, April 12, 9:00 a.m.-4:30 p.m.

Tuesday, April 13, 9:00 a.m.-12 noon

SUNDAY, APRIL 11

8:00 a.m.—Executive Committee Meeting—President's Room.

10:00 a.m.—Opening Session of the California Medical Association. Progress Report by the President of the Auxiliary. All Auxiliary members and Doctors' wives are invited to attend.

10:30 a.m.—Pre-Convention Board Meeting—Room of the Dons, Mark Hopkins Hotel.

MONDAY, APRIL 12

9:30 a.m.—First Session of the Eighteenth Annual Convention—Room of the Dons, Mark Hopkins Hotel.

12:30 p.m.—Luncheon honoring the State President, the President-Elect, and Past Presidents, members of the Advisory Council—Peacock Court, Mark Hopkins Hotel.

7:30 p.m.—California Medical Association Annual Banquet honoring the President.

TUESDAY, APRIL 13

9:30 a.m.—Second Session of the Eighteenth Annual Convention—Room of the Dons, Mark Hopkins Hotel.

12:00-1:00 p.m.—Post-Convention Board Meeting.

12:00-1:00 p.m.—School of Instruction for new County Presidents, Officers, and Committee Chairmen.

4:00-6:00 p.m.—Tea honoring the wife of the President of the California Medical Association—Regency Room, Huntington Hotel.

Technical Exhibits

The Association is fortunate in having a well-rounded technical exhibit to offer those attending the 1948 Annual Session. Exhibits will be found in the Colonial and Italian Rooms of the St. Francis Hotel, on the mezzanine floor adjacent to the registration desk.

Members are reminded that the technical exhibitors pay the Association for the privilege of participating in the exhibit and that the funds from this source are entirely applied to the cost of the meeting. This makes it possible for the Association to conduct a large Annual Session without the need of charging a registration fee or increasing your dues to cover the expense.

You may show your appreciation of this valuable contribution by attending the exhibits, visiting and registering with the exhibitors and letting them know they are more than welcome at the meeting. From the scientific point of view, the exhibitors will have on display the latest in therapeutic and diagnostic agents, a display which is not possible to find similarly assembled except at a meeting of this type.

All exhibitors are listed below, with their locations. On the following pages is an alphabetical listing which gives a brief description of the products and services displayed for your information and convenience.

About the Exhibitors

ABBOTT LABORATORIES — Green Room Foyer
North Chicago, Illinois

You are most cordially invited to visit the display prepared for this meeting. Abbott Professional Service Representatives in attendance will welcome discussion of the new developments in the antibiotic, anticonvulsant, allergenic, anesthetic, sulfonamide, hematinic, hormone, vitamin and other fields.

A. S. ALOE COMPANY — Italian Room
Los Angeles

We shall exhibit the new Aloe Short Wave, with crystal control, which has been designed to conform to the F.C.C. Rules, as well as our substantial line of instruments and equipment for the medical office. Steeline Examining and Treatment Room equipment will be on display, and its construction has been refined and improved through its production in our new modern factory covering over one hundred thousand square feet of floor space.
Latest instruments for use in the Doctor's laboratories will also be displayed and a cordial invitation is extended to the members to visit our display in Booth No. 35.

THE BAKER LABORATORIES, Inc. — Colonial Room
Cleveland, Ohio

The Baker display is built around the six-step approach to optimum infant nutrition which leads to the picture of the happy mother and the healthy child. An adjusted protein, two carbohydrates, a modified fat, vitamins, soluble mineral salts and iron, coupled with simplicity of preparation and low cost, provide for complete nutrition and insure cooperation in the home. Baker's Modified Milk, liquid or powder, may be used interchangeably from birth to the end of the bottle-feeding period. May we discuss your infant feeding problem with you?

BARNES-HIND LABORATORIES, Inc. — Colonial Room
San Francisco

The Barnes-Hind Laboratories cordially invite physicians to visit our exhibit where there will be displayed many of our well-known pharmaceutical preparations, as well as some of our newer developments in pharmaceutical buffers, contact lens solutions and amino acid products.

DON BAXTER, Inc. — Colonial Room
Glendale

Present-day concepts of parenteral therapy and blood banking will be presented by Don Baxter, Inc., Glendale 1, California; Mr. J. L. Sweeny in charge. Of particular interest will be the new Isotonic Solution of Sodium Sulfate, the new V-14 *Vacoset*, irradiated plasma, and new blood transfusion equipment.

BILHUBER-KNOLL CORP. — Colonial Room
Orange, New Jersey

For information on the latest developments of the medicinal chemicals of Bilhuber-Knoll Corp. visit Booth No. 31. Your discussions will be welcomed on Oenethyl—their new vasopressor; Octin—antispasmodic; Metrazol—analeptic and antianoxiant; Theocalcin—diuretic and myocardial stimulant and Dilaudid—analgesic and cough sedative. These and their other dependable prescription chemicals are prescribed alone or in combinations with other drugs as the individual patient may require.

THE BORDEN COMPANY — Green Room Foyer
New York, New York

Spend a few pleasant moments with Mr. I. Eugene Symonds and Mr. Shupps and refresh your memory on our Prescription Products. Meet Biolac, a liquid modified milk for infant feeding; Mull Soy, a liquid hypoallergenic soy food for your milk allergic patients; Dryco with its high-protein, low fat content for formula control; powdered whole milk, Klim; the improved milk sugar, Beta Lactose, for carbohydrate supplementation; and the powdered Merrell-Soule Protein and Lactic Acid milks for special infant feeding cases.
We particularly invite your attention to Gerilac, a new vitamin-fortified powdered milk for well-rounded nutrition in convalescence, pre- and post-operative diets, soft and liquid diets, pregnancy and lactation, geriatrics, et al.

BRISTOL LABORATORIES, Inc. — Colonial Room
Syracuse, New York

Bristol Laboratories, Inc.'s exhibit will be devoted to the display of many of its antibiotic and pharmaceutical products. Some of these products are: the 10 cc. Vial of Crystalline Sodium Penicillin G in Oil and Wax in the new liquid form; Penicillin Vaginal Suppositories; Alminate Tablets, Bristol's brand of aluminum dihydroxy aminoacetate for the management of peptic ulcer, gastritis and hyperacidity and Barbonate Tablets, a companion product containing Alminate with the combination of phenobarbital and belladonna alkaloids to give it an antispasmodic and sedative action; Palapent, a palatable elixir of pentobarbital Sodium, U.S.P., an excellent prescription vehicle.

BURROUGHS WELLCOME & COMPANY
New York, New York — Colonial Room

Among significant products featured will be "Wellcome" Globin Insulin, which provides an action which is timed to be more suitable for the average diabetic; "Tabloid" "Emperin" Compound with Codeine Phosphate gr. 1, No. 4, for relief of severe pain; "Nutragest," the palatable dietary compound containing pre-digested proteins (amino

acids and polypeptides), carbohydrates; and "Methedrine," a recent sympathomimetic drug of wide therapeutic application.

BUSH ELECTRIC COMPANY — Colonial Room
San Francisco

As agents for the Burdick Corporation and the X-Ray Division of the George W. Borg Corporation, we shall exhibit Burdick's new X-85 Short Wave Diathermy—the first Diathermy to receive Certificate of Approval of the Federal Communications Commission; Acceptance of the American Medical Association and Approval of the Underwriters' Laboratories. We shall also display a 1948 Model Combination Radiographic & Fluoroscopic X-Ray Unit and the Borg X-Ray line. Northern California Physicians are urged to visit this exhibit and investigate the facilities available in the Electro-medical field by the Bush Electric Company of San Francisco.

CAMEL CIGARETTES — Green Room Foyer
New York, New York

Camel Cigarettes will exhibit a large detailed photograph showing the calculated absorption of nicotine from cigarette smoke in the human respiratory tract. Representatives will be on hand to discuss any phase of the physiological effects of smoking.

S. H. CAMP & COMPANY — Italian Room
Jackson, Michigan

A series of illuminated transparencies depicting anatomical conditions before and after application of Camp Anatomical Supports will be displayed. Experts in attendance will answer questions pertaining to the scientific application of Anatomical Supports and advise regarding the availability of them in Authorized Service Departments throughout the country.

CARNATION COMPANY — Colonial Room
Los Angeles

Carnation Company, Los Angeles, California. You are invited to visit Booth No. 20, where you will see an attractive display on Carnation Evaporated Milk—"the milk every doctor knows." Some valuable information on the use of this milk for infant feeding, child feeding, and general diet will be presented and the method by which Carnation is generously fortified with pure crystalline Vitamin D—400 U.S.P. units per reconstituted quart—will be explained. Interesting literature will also be available for distribution.

CIBA PHARMACEUTICAL PRODUCTS, Inc.
Summit, New Jersey — Colonial Room

The Ciba exhibit of "Economical Hormone Therapy," features *Metandren* Linguets, the most potent oral androgen in tablets, designed for absorption through sublingual mucosa; *Lutocylol* Linguets, orally effective progestogen, especially designed for sublingual absorption; and *Ethinyl Estradiol*, the most potent oral estrogen.
Representatives in attendance will gladly furnish literature and answer questions about these and other Ciba products.

COCA-COLA COMPANY — Green Room Foyer
Atlanta, Georgia

Ice-cold Coca-Cola will be served the delegates through the joint cooperation and courtesy of The Coca-Cola Bottling Company of California, San Francisco, and The Coca-Cola Company.

COMMERCIAL SOLVENTS CORPORATION
New York, New York — Colonial Room

The Commercial Solvents Corporation exhibit will feature among its pharmaceutical products the new Soluble Tablets Crystalline Penicillin C.S.C. which represent a significant advancement in penicillin therapy. Also on display will be the new C.S.C. Permanent Metal Syringe and the C.S.C. Disposable Syringe for the administration of penicillin in oil and wax.

CUTTER LABORATORIES — Italian Room
Berkeley

The Cutter Laboratories exhibit in Booth No. 48 will be centered around an unusual mechanical book display. The complete line of pediatric products including our triple vaccine, DipPertTet, Plain and Aluminum Hydroxide Absorbed; Blood Fractions, including Immune Serum Globulin for measles modification, Albumin and Hypertussis; and Intravenous Solutions and Saftiflasks including our KNL Solution will be available. Won't you stop in and see us?

F. A. DAVIS COMPANY — Colonial Room
Philadelphia, Pennsylvania

Following is a partial list of new books and new editions which will be on display at Booth No. 19. Drop in and look them over: Arthritis—Bach; Gall Bladder Diseases—Behrend; Clinical Tuberculosis—Goldberg; Reparative and Reconstructive Surgery—May; Dermatology—Greenbaum; Ear, Nose and Throat—Lederer; Clinical Radiology—Pillmore; Pediatric Therapy—Litchfield and Dembo; Rhinoplasty—Maliniac; Diagnostic Signs—Robertson; Pre and Postoperative Care—Tourish and Wagner; Gonioscopy—Troncoso; Cyclopedia of Medicine, Surgery and Specialties—Piersol and Bortz; Medical and Physical Diagnosis—Loewenberg; Pediatric Progress—Litchfield and Dembo; Textbook of Ear, Nose and Throat—Lederer and Hollender; Clinical Cystoscopy—McCrea.

DAVIS & GECK, Inc. — Colonial Room
Brooklyn, New York

Davis & Geck, Inc., manufacturers of sterile surgical sutures, will present an armamentaria of suture-needle combinations specifically prepared for every type of surgery. Mr. W. Morris Thomas, representative of the company, will be in attendance. Literature and technical information on sutures and wound healing will be available. This will include the D&G Manual, reprints and monographs as well as leaflets dealing with the development and improvement of D&G sutures.

EATON LABORATORIES, Inc. — Italian Room
Norwich, New York

The Eaton Laboratories, Inc., of Norwich, New York, will exhibit several pharmaceutical preparations of interest to the Medical Profession.
Furacin Soluble Dressing containing a new chemotherapeutic agent Furacin (brand of nitrofurazone) will be exhibited. This compound is a new antibacterial agent recently accepted in New and Non-official Remedies.
Furacin Solution, a new vehicle for Furacin, will also be exhibited. This new liquid vehicle for Furacin has been compounded at the request of many clinicians for use in conditions where the soluble dressing is inconvenient or contraindicated.
Aspogen, a new antacid for the treatment of peptic ulcer will be exhibited.
Our representatives will be very pleased to discuss these products with all who register at the Eaton booth. The latest professional literature and samples will be available.

C. B. FLEET CO., Inc. — Italian Room
Lynchburg, Virginia

C. B. Fleet Co., Inc., cordially invites you to Booth No. 36 where it is proud to exhibit Phospho-Soda (Fleet), the one product of its manufacture. Phospho-Soda (Fleet) has come to occupy a significant position wherever sodium phosphates or other salines are indicated. It is a pure, stable, aqueous concentrate of the two U.S.P. Sodium Phosphates with a history of more than fifty years of manufacture and ethical distribution. Should you not be thoroughly acquainted with Phospho-Soda (Fleet), the representative at the booth will discuss with you the chemistry, advantages and possible application of Phospho-Soda (Fleet) in your practice.

GENERAL ELECTRIC X-RAY CORP.
Chicago, Illinois — Green Room Foyer

General Electric X-Ray Corp. will exhibit the latest in x-ray and electromedical equipment and supplies.

GERBER PRODUCTS CO. Colonial Room
Oakland

Gerber Products Company extends a cordial invitation to you to visit its exhibit of Strained Foods, Junior Foods and Pre-cooked Cereals at Booth No. 15. Recent revisions of their service literature will be displayed.
Your special attention is called to the display of the new Gerber Meats for Babies. Varieties include Beef, Liver and Veal in both strained and chopped forms.

GOLDEN STATE CO., Ltd. Colonial Room
San Francisco

Golden State Dairy Products will feature an exhibit displaying their catering ice cream, homogenized milk, cottage cheese and butter, sampling doctors with these products and distributing literature to further demonstrate the great nutritional values of dairy products in the diet. The theme of the exhibit will be "You Strike It Rich In Golden State Products" which is not only the company slogan but ties in with the current three-year Centennial Celebration.

GUILDCRAFTERS OF HOLLYWOOD
Hollywood Green Room Foyer

Art metalwork in the form of plaques. The designs are insculptured, the lettering engraved. Quotations, Oath of Hippocrates, etc. Awards for outstanding service. Medical Fraternities and Honor Societies certificates in metal. Push buttons in chrome, bronze and brass for home and office. Special desk, wall and outdoor signs. Maker of the plaques for the Past Presidents of the California Medical Association.

HOFFMAN-LA ROCHE Colonial Room
Nutley, New Jersey

Roche is happy to exhibit at the meeting of the California Medical Association. They invite members of the Association to visit Booth No. 21 where members of the Roche special representatives staff will be present to discuss several new additions to the Roche line of specialties. These include: Syrup Sedulon, a sedative cough preparation; Thephorin, a new treatment for allergic disorders; Rayopake, a new radiopaque contrast medium; and other products of interest to members of the profession.

HOLLAND-RANTOS COMPANY, Inc. Colonial Room
New York, New York

Koromex Jelly and Koromex Cream will be featured at Booth No. 5. You may recall it was the Holland-Rantos Company, Inc., that pioneered the introduction of modern contraceptive technique—so frequently referred to as *the Koromex Method*. The medical background and clinical use of Koromex Jelly dates back to 1925. Medical service representatives will be on hand to discuss with interested physicians the latest data on Koromex Jelly and Cream.

JUNKET BRAND FOODS Italian Room
Little Falls, New York

The importance of rennet in infant and adult nutrition and the value of rennet desserts in both normal and restricted diets will be explained. Enlarged photos illustrate the action of the rennet enzyme in producing softer, finer, more readily-digestible milk curds. Free literature is available describing dietary applications of rennet products. All physicians will be presented with complimentary packages of "Junket" Brand Rennet Powder and "Junket" Brand Rennet Tablets.

KIDDE MANUFACTURING COMPANY, Inc.
Bloomfield, New Jersey Colonial Room

In Booth No. 9, the Kidde engineered Utero-tubal Insufflator. Completely safe—insures correct volume and pressure at tolerable limits. Simple operation—one valve, one gauge—requires only small cartridge of Carbon Dioxide gas. Provides diagnostic and therapeutic use of Carbon Dioxide gas or opaque oil as well as permanent record of tests.
Also on display the Kidde Dry Ice Apparatus used in treatment of superficial skin lesions. This apparatus is becoming increasingly popular because of its simplicity and superior cosmetic results obtained.

LEDERLE LABORATORIES Colonial Room
New York, New York

The Lederle exhibit will feature purogenated diphtheria, tetanus, and diphtheria-tetanus toxoids, new highly refined antigens characterized by lessened reactivity and antigenic in lower doses, Folvite brand folic acid, a synthetic product useful in certain types of macrocytic anemias, and Cardiolipin, a stable non-nitrogenous phospholipid from beef heart used in tests for syphilis.

ELI LILLY AND COMPANY Colonial Room
Indianapolis, Indiana

The Lilly exhibit for 1948 features a presentation of "Dolophine Hydrochloride" (Methadon Hydrochloride, Lilly). You will be interested in the comparison of postoperative relief of pain with "Dolophine Hydrochloride," 10 mg. and Morphine, 15 mg. Many other Lilly products will be on display. Attending Lilly medical service representatives will be present to aid visiting physicians in every way possible.

M & R DIETETIC LABORATORIES, Inc.
Columbus, Ohio Green Room Foyer

M & R dietetic Laboratories, Inc., Booth No. 61, will display. Similac, a food for infants deprived either partially or entirely of breast milk. Messrs. C. F. Leffel, R. R. Michael, M. B. Davis, and Miles Engle will appreciate the opportunity to discuss the merit and suggested application for both the normal and special feeding cases.

MALTINE COMPANY Colonial Room

MEAD JOHNSON & COMPANY Italian Room
Evansville, Indiana

Mead Johnson & Company of Evansville, Indiana, have a display of Infant Diet materials and vitamin products, also several new items of especial interest. Amigen (Mead's)—a pancreatic digest of casein containing amino acids and polypeptides for parenteral or subcutaneous use. Protolysate (Mead's)—an enzymatic digest of casein consisting of amino acids and polypeptides for oral or tube administration. Protenum (Mead's)—a palatable high protein food of low fat content for use as a dietary supplement. Lonolac (Mead's)—for low sodium diets, is nutritionally similar to powdered whole milk but contains only a negligible amount of sodium. Mead's Mixed Vitamin capsules—designed to supplement the diet of expectant and nursing mothers and to augment the vitamin intake of adults. Mead's Polyvitamin Dispersion—to meet the needs of infants and children whose fat absorption is impaired, for the infant to whom the physician wishes to prescribe all the vitamins in a simple form.

THE MEDICAL PROTECTIVE COMPANY
Fort Wayne, Indiana Italian Room

The Medical Protective Company's representatives, thoroughly trained in Professional Liability underwriting, invite you to visit exhibit Booth No. 47. They are entirely familiar with the principles of the reciprocal rights and duties of a doctor and patient and with the circumstances peculiar to that relationship. They will be glad to explain how their company meets the exacting requirements of adequate liability protection, which are peculiar to the Professional Liability field.

MERCK & CO., Inc. Italian Room
Rahway, New Jersey

Information on the following subjects will be available at the Merck booth: The antibiotic agents—Streptomycin and Penicillin. Neo-Antergan—the new antihistaminic agent of low toxicity. Gold therapy in the treatment of active rheumatoid arthritis. Anesthesia of short duration with Vinethene. Relief of acute attacks in angina pectoris. Treatment of peripheral vascular conditions. Council accepted indications for the vitamins. The Merck repre-

sentatives in attendance will be pleased to supply literature on the above subjects, and also answer questions on the chemotherapeutic agents involved.

THE WILLIAM S. MERRELL COMPANY
Cincinnati, Ohio — Colonial Room

Infazyme, the new pleasant-tasting nutrient especially designed for the "sickly" child, will be featured at the Merrell Booth. This latest Merrell Pediatric Specialty combines the essential B vitamins and the whole B complex from liver, rice bran and yeast with readily available iron and supplementary amounts of the essential amino acids. The rich fruity tang of Infazyme represents an unusual taste accomplishment in a preparation containing liver, iron and amino acids. Infazyme is the first concentrated recuperative tonic containing amino acids to be specifically designed for infants and children.

E. S. MILLER LABORATORIES, Inc. — Colonial Room
Los Angeles

The E. S. Miller Laboratories, Inc., manufacturers of Pharmaceutical products since 1923 will exhibit a full line of Council Accepted Injectable Solutions, Tablets and Capsules. Especially featured will be their Estrogens and Aminophylline.

C. V. MOSBY COMPANY — Colonial Room
San Francisco

New advances in medicine are multitudinous. Most of them are currently covered in the many new Mosby publications. These are available at the Mosby Booth No. 12.

PACIFIC COAST MEDICAL BUREAU AGENCY, Inc.
San Francisco — Colonial Room

Are you looking for a new location or association to practice or do you need trained medical assistance? We have registered with us many well qualified physicians in general practice and the specialties, as well as medical secretaries, nurses and technicians. In the event you are not satisfied with your present situation, you might like to review our various openings on the Pacific Coast. We are also licensed Real Estate and Business Opportunity Brokers, specializing in the sales of medical practices, clinics, hospitals, and sanatoria in California. One of our representatives will be very pleased to discuss our services with you.

PARKE, DAVIS & COMPANY — Italian Room
Detroit, Michigan

Members of Parke, Davis & Company's Medical Service Staff, fully informed regarding the progress in Pharmaceutical and Biological Research, and desirous of presenting various new advancements to you, will be on hand at our Technical Exhibit to discuss new and old products. Featured, will be such outstanding Specialties as—Benadryl, Vitamins, Adrenalin, Oxycel and Thrombin, Topical. Also, the most recent types of Biologicals, including other therapeutic agents of chemotherapeutic interest, will be displayed. We invite you to visit our exhibit while attending this meeting.

PET MILK COMPANY — Colonial Room
St. Louis, Missouri

Pet Milk booth will be staffed by men fully competent to give an accurate description of the fortification of Pet Milk with pure crystalline vitamin D. The new Pet Milk formula selector and solid food guide will be available to any doctors wishing one. The miniature can of Pet Milk will be given to all registrants.

PHILIP MORRIS & CO., Ltd., Inc. — Italian Room
New York, New York

Philip Morris & Company will demonstrate the method by which it was found that Philip Morris Cigarettes, in which diethylene glycol is used as the hygroscopic agent, are less irritating than other cigarettes. Their representative will be happy to discuss researches on this subject, and problems on the physiological effects of smoking.

SANBORN COMPANY — Colonial Room
Cambridge, Massachusetts

Exhibit Booth No. 17—The latest Sanborn electrocardiographs including improved models direct-writer and photographic portable cardiettes. Also Sanborn Company's newest metabolism tester which embodies many refinements requested by busy hospitals, clinics and physicians from all parts of the country.

SANDOZ CHEMICAL WORKS, Inc. — Colonial Room
San Francisco

This display will feature Mesantoin, a new anticonvulsant for the treatment of epilepsy, D.H.E. 45 (Dihydroergotamine) for the treatment of migraine, and several cardiac glycosides, including Cedilanid, Digilanid, Strophosid and Scillaren.
Well-informed attendants will be present to answer all inquiries and to discuss new products to be released in the near future.

SAN FRANCISCO SURGICAL CO. — Italian Room
San Francisco

New 1948 Hamilton Medical Furniture. Sterilizers, Autoclaves, new E.K.G. machine, direct writing; Instruments, Laboratory Supplies; Physiotherapy equipment. Orthopedic Supplies; X-Ray Equipment; Ritter Medical Equipment. Also complete lines of all description, for the medical profession.

SCHERING CORPORATION — Italian Room
Bloomfield, New Jersey

Important new hormone and pharmaceutical preparations will be featured at the Schering booth. Micropellets Progynon is a new potent form of the female sex hormone. Combisul and Combisul Liquid are the triple sulfonamide combinations which eliminate the dangers of sulfonamide renal damage. New high potencies of Oreton-M, Pranone and Progynon-B are presented. Schering Professional Service Representatives will welcome you and will be happy to answer your inquiries concerning Schering's new products as well as the older and time-tested hormones, x-ray diagnostic, chemotherapeutic and pharmaceutical preparations.

G. D. SEARLE & CO. — Italian Room
Chicago, Illinois

You are cordially invited to visit the Searle booth where our representatives will be happy to answer any questions regarding Searle Products of Research.
Featured will be Hydryllin, the new antihistaminic, as well as such time-proven products as Searle Aminophyllin in all dosage forms, Metamucil, Ketochol, Floraquin, Kiophyllin, Diodoquin, Pavatrine and Pavatrine with Phenobarbital.

SHARP & DOHME — Italian Room
Philadelphia, Pennsylvania

Sharp & Dohme extends a cordial welcome to all visitors at Booth No. 42. Items on exhibit include a new dosage form of "Delvinal" Sodium Vinbarbital for the production of obstetric amnesia and analgesia; new antibiotic preparations including Thyrothricin along with "Sulfathalidine" and "Sulfasuxidine," intestinal bacteriostatic agents.

SICULAR X-RAY CO., Inc. — Colonial Room
San Francisco

This exhibit includes a one-tube radiographic and fluoroscopic unit of the latest design and features.

SMITH-DORSEY COMPANY — Colonial Room
Lincoln, Nebraska

The Smith-Dorsey Company welcomes the opportunity to greet the physicians of the State of California at their exhibit. Parenteral products of all types will be displayed in addition to specialties of particular interest to the general practitioner. Our representatives will be pleased if you make our exhibit your headquarters during the convention.

SMITH, KLINE & FRENCH LABORATORIES Colonial Room
Philadelphia, Pennsylvania

Professional representatives will be glad to answer questions and to discuss uses in your own practice of several interesting products among which are: *Dexedrine Sulfate Tablets:* Few therapeutic agents have risen so dramatically and rapidly to pre-eminence as Dexedrine Sulfate. Today, its widespread clinical usefulness in depressive states and weight reduction makes this drug undeniably the central nervous stimulant of choice. Dexedrine is remarkable in that it spares the patient the disturbing consciousness of "drug stimulation," is virtually a "single action" drug, and has an extremely wide margin of safety. *Edrisal:* Edrisal not only affords unusually effective relief from pain, but also—because it contains Benzedrine Sulfate in addition to acetylsalicylic acid and phenacetin—markedly improves the patient's mental outlook; a prime objective in the symptomatic treatment of painful conditions.

SPENCER, INCORPORATED Colonial Room
New Haven, Connecticut

We cordially invite you to visit exhibit displaying individually designed supports for abdomen, back and breasts. One of the supports featured is the Spencer Spinal Support, designed to aid in the treatment of spinal curvatures, back injuries and diseases, and for wear following spinal operations. Another support shown is the Spencerflex, a light, comfortable support for men which is excellent for postoperative wear. The Spencer Breast Form, designed to conceal disfigurement and restore normal figure lines for patients who have undergone mastectomy, will also be displayed.

E. R. SQUIBB & SONS Colonial Room
New York, New York

Presenting a wide variety of newly released Squibb preparations for prescription use, among them Liafon, a new hematinic, Pneumococcus Polysaccharides for Active Immunization, Penicillin Soluble Troches 5000 Units, P.O.W. Fluid, Amniotin Suppositories (capsule type), and Diethylstilbestrol Tablets 25 mg.

J. W. STACEY, Inc. Italian Room
San Francisco

Stacey's, one of the world's famous medical bookstores, will have an interesting display of the new medical books in Booth No. 45. You are cordially invited to see the new texts and monographs recently published in the subjects of your interest.

STAYNER CORPORATION Borgia Room Foyer
Berkeley

Stayner Corporation of Berkeley again expresses its sincere appreciation to the Western Medical Profession for its splendid support. Your cooperation and confidence have made it possible for us to now manufacture some 120 pharmaceutical products. You are cordially invited to inspect our modern laboratories and to visit our exhibit.
Featured at the Stayner booth will be a demonstration of equipment originated to test the Stayner process of "timed-disintegration" Enteric Coated Tablets. Our specially trained representatives will be pleased to discuss our many vitamin specialties and pharmaceutical products with you.

THE STUART COMPANY Colonial Room
Pasadena

The Stuart Company, Pasadena—Vitamin Products: (1) The Stuart Formula, liquid and tablets, multiple vitamin and iron therapy at the maintenance level. (2) The Stuart Therapeutic Multivitamin, multiple vitamin therapy at the therapeutic level. (3) The Stuart Therapeutic B Complex, C., water-soluble vitamin therapy at the therapeutic level. (4) The Stuart Hematinic, iron, copper, B Complex and C, therapy at the therapeutic level. These four Stuart products can help simplify nutritional prescriptions. Easy to remember—the name and the therapy needed. We hope you will visit the Stuart exhibit, Booth No. 7.

U. S. STANDARD PRODUCTS Colonial Room
Woodworth, Wisconsin

One of America's oldest Biological houses specializing in government licensed biologicals and quality pharmaceuticals specialties. Rabies Vaccine, Tetanus Toxoids, Diphtheria, and other active immunizing agents.

THE UPJOHN COMPANY Italian Room
Kalamazoo, Michigan

The central panel of the exhibit symbolizes that man's resistance to stress is being increased by science. The other panels show the effect on the adrenals of various stresses —infection, exercise, surgery, and anoxia. The final panel shows the relative potency of adrenal cortex sterile solution and lippo-adrenal cortex sterile solution.

WALTERS SURGICAL COMPANY Colonial Room
Los Angeles

WHITE LABORATORIES, Inc. Colonial Room
Newark, New Jersey

White's Dienestrol Tablets (Council Accepted)—a new orally effective synthetic estrogen is featured. Complete information and literature are available regarding the advantages of Dienestrol's high biologic activity, excellent patient-tolerance and economy.
Other products of White Laboratories are on display and White's Medical Service Representatives in attendance will be pleased to supply any further information requested.

PRE-CONVENTION REPORTS

Officers • Councilors • Committees • County Societies

REPORTS OF GENERAL OFFICERS

REPORT OF THE PRESIDENT

To the House of Delegates:

During the past year, it has been my privilege to serve as your President. In this capacity, I have attended all Council meetings and all but one meeting of the Executive Committee. It has been the duty of the President to represent the Association at numerous public and semi-public meetings.

I have had the opportunity to visit a number of County Societies and some regional meetings of County Societies during the past year. It has been gratifying to observe the almost uniform support given by County Societies and their members to the policies and positive program of the California Medical Association.

The past year has witnessed the failure of a renewed effort to impose Compulsory Health Insurance upon the people and the profession of this State. In spite of the successful conclusion of this issue in the last Legislature, the threat of Socialized Medicine still remains and we can expect renewed attacks in the future. After the close of the recent Legislature, the Governor publicly announced his intention to accomplish the enactment of Compulsory Health Insurance during his present term of office.

As a result of the Public Relations campaign and the Voluntary Health Insurance drive in the past two years, the position of the California Medical Association has been greatly strengthened. We are in far better position to repel legislative efforts to socialize our profession than at any previous time.

This fact does not justify complacency. An active and positive program must be continued if we are to reap the full benefits of the time, effort, and expenditure thus far invested.

The unity of the profession is of paramount importance. Such differences of opinion as may exist among us must be resolved in our own meetings so that we may face our opponents with a unified front.

Respectfully submitted,
JOHN W. CLINE, *President.*

REPORT OF THE PRESIDENT-ELECT

To the President and the House of Delegates:

As President-Elect I have attended the meetings of the Council and Executive Committee and have appeared before various groups and served on committees endeavoring to carry out the policies of the California Medical Association. There are no specific reports to be made from these activities which are not covered in the other official reports.

Respectfully submitted,
E. VINCENT ASKEY, *President-Elect*

REPORT OF THE SPEAKER OF THE HOUSE OF DELEGATES

To the President and the House of Delegates:

There is just one paramount issue before the California Medical Association today: Can we make the voluntary prepayment of the costs of illness sufficiently comprehensive, efficient and attractive to meet the requirements of those who need our services on such a basis? Can we convince an important majority of the public that their dollar will buy more and better real medical care when so expended than when taken from them by taxation and returned as a largess from Sacramento? And can we do it in time?

A large part of the work of the Council, the Executive Committee and of the many special committees required to conduct the Association's affairs is concerned directly or indirectly with this basic issue. Members of the Council and special committees have shown a commendable insight into the many ramifications of this basic problem facing our members. They have been tireless and unselfish in their efforts to effect a solution.

The Association does have a sound, constructive program in medical economics. It has enlisted the services of a most efficient firm of public relations councilors. Its radio feature, California Caravan, heard over the American Broadcasting Company network at 3:00 p.m. on Sundays, has just received the California Parent-Teachers Association award as the outstanding production of 1947. From other sources comes evidence that our efforts are bringing tangible results in terms of improved public sentiment.

Our program can succeed only if and to the extent it is recognized that California is one single state composed of rural areas and metropolitan centers, and that the interests of the physician in Yreka, San Francisco, Los Angeles and National City are essentially the same. All must be represented by one unified state medical association functioning in the interests of every member. In this plan there is no room for the petty provincialism of personal and sectional jealousy.

Respectfully submitted,
L. A. ALESEN, *Speaker*

REPORT OF THE VICE-SPEAKER

To the President and the House of Delegates:

The Vice-Speaker has attended all of the meetings of the State Council and has carried out the special duties assigned to him by the Council and its officers.

Respectfully submitted,
DONALD A. CHARNOCK, *Vice-Speaker.*

REPORT OF THE CHAIRMAN OF THE COUNCIL

To the President and the House of Delegates:

The year ending in April, 1948, has been one which has been a heavy one on the Council. Five Council meetings were

held, plus many meetings of the Executive Committee, and as Chairman of the Council I attended all save one.

Much time was consumed by the Council because of the increase in the number of problems to be attacked and the burdens which must he carried by the Council. An attempt has been made to streamline, somewhat, the work of the Council and numerous and active committees have heen appointed during the year to work on special subjects and special projects.

It is hoped that the Committee on Constitutional Changes and Amendments submit a report suggesting changes which may be of value in coordinating and streamlining the work done by the Council.

The Chairman of the Council probably more than anyone else realizes that the amount of work put upon the members of the Council has increased in volume, scope and importance and the desire of the Chairman at this time is to thank all those members who have given so much of their time to this organization.

It is likewise my desire to thank all those in the office of the California Medical Association for their cooperation and untiring efforts.

Respectfully submitted,

Edwin L. Bruck, *Chairman of the Council*

Report of the Council

To the President and the House of Delegates:

The Council bas held five meetings since the 1947 Annual Session was concluded. These were on May 3, June 21-22, September 20-21, December 21-22, 1947, and February 21-22, 1948. Another meeting is planned for April 10, 1948, and the Council will, according to constitutional requirements, hold daily meetings during the course of the 1948 Annual Session.

The Council calls attention to the fact that its meetings now occupy two days each, which is indicative of the volume of work confronting it. Two-day meetings were inaugurated this year and have been of great assistance in bringing before all Council members every item requiring Council consideration.

Minutes of all Council meetings are printed in digested form in the official journal and all Association members are urged to read them in order to gain a realization and understanding of the business confronting the Association through the Council.

Numerous items have been dealt with by the Council in the past year, some of which are summarized below. Additional items may become apparent before the time of the Annual Session, in which case they will he covered by a supplemental report to be given to the House of Delegates at the time of its convening.

1. *Vacancy on Council.*

On May 3, 1947, Dr. Louis J. Regan of Los Angeles presented his resignation as a Councilor-at-large. Subsequently this vacancy was filled by the unanimous election of Dr. Eugene F. Hoffman of Los Angeles to this position. This vacancy will be presented to the House of Delegates for election of a Councilor-at-large to fill the unexpired term of Dr. Regan, term expiring 1949.

2. *Membership of Association.*

The Council wishes to point out that the membership of the Association at the close of 1947 totaled 8,920 active members, a new record high. At the same time, it is a source of pride that only ten 1946 members were listed as not having paid their 1947 dues at the end of the year. This is less than one-eighth of one per cent and represents a tribute to the value which the members attach to their memberships.

3. *1947 House of Delegates Resolutions.*

The Council has considered all resolutions adopted by the 1947 House of Delegates and a summary of Council actions on such resolutions may be found in the minutes of the 345th Council meeting, held June 20-21, 1947. Members are urged to read these minutes. Specific items among the 1947 resolutions will be discussed individually in following items.

4. *Public Policy and Legislation.*

The Council has been kept fully advised of all legislative activities by Dr. Dwight H. Murray, chairman of the Committee on Public Policy and Legislation, and by Mr. Ben Read, executive secretary of the Public Health League of California. The Council wishes to congratulate Dr. Murray and Mr. Read, together with all others who assisted in the legislative program, for a splendid record of accomplishment during the 1947 legislative session. While not all bills in which the Association was interested received favorable consideration by the Legislature, the record is extremely impressive, particularly as to the overwhelming defeat of measures to establish a compulsory health insurance scheme in California. Credit for this accomplishment, among others, must go to many individuals, all of whom are hereby given the unanimous thanks of the Council for their contributions.

The Council wishes to call attention to the resolution adopted by the 1947 House of Delegates in regard to seeking establishment of a medical examiner system in California to replace the present coroner system. On studying this proposal, the Council found that the coroner, as a public official, is brought into so many activities in all legal codes of the state that an attempt to replace him with a medical examiner system constitutes a major legal and legislative undertaking. Accordingly, it was impossible to prepare and propose such legislation in 1947; instead, the Council called attention to the need of a strong medical examiner system in letters to all county medical societies. The Council is dubious of the ability of the Association to bring about such a legislative change as that contemplated in the 1947 resolution and respectfully directs the attention of the House of Delegates to this matter for such further consideration as the House may wish to give it.

5. *Committee on Medical Economics.*

This committee was empowered by the Council to undertake a study of individual physician-patient relationships, in accordance with a resolution adopted by the 1947 House of Delegates. The committee has reported regularly to the Council and has outlined a study of this subject, the results of which are expected to be placed before the 1948 House of Delegates. Based upon this survey, among other studies, a long-range program of public relations is expected to be developed. The committee deserves the thanks of the Association for its untiring work.

6. *Public Relations.*

During the past year the Council has authorized a continuation of the public relations program carried on for the past two years. This has meant the staging of "Voluntary Health Insurance Weeks" in numerous counties, until only ten counties remain to be covered in this program. This phase of the overall program is expected to be completed early this year, at which time the expense attendant on maintaining a full-time staff of experts will be greatly reduced. The program also includes the publication of the "C.M.A. Public Relations News," a bi-monthly news-type bulletin to acquaint all Association members with the activities of the public relations staff and with current developments in the fields of legislation, prepayment plans and public relations. This publication is regularly sent to a wide list, including Association members, members of the A.M.A. House of Delegates, secretaries of state medical associations and others. Comments from all parts of the country have

been extremely favorable and one territorial medical association has asked to purchase enough copies of each issue to send to its entire membership.

Also continued this past year has been the Association's radio program, "California Caravan." This program has been increased to a 30-minute program on Sunday afternoons and has received favorable comment from many sources. It has been listed by the California Congress of Parent-Teachers Associations as recommended listening for all California school children and has further been recommended by the Los Angeles County School Board for the Peabody award for educational programs. This award, which has not yet been announced, is the equivalent of the Pulitzer prizes given annually in the field of journalism.

In addition to these major items, numerous other matters have been presented to public relations counsel, who has given generously of his time and efforts in their solution and handling.

The Council feels constrained to point out that since the Association's public relations activities were intensified in 1945, a vast change has come over the legislative picture in California. Where the proposals for compulsory health insurance in 1945 made great strides before the Legislature and came close to a record vote on the floor of the Assembly, similar measures introduced in the 1947 legislative session were much more easily handled. A great deal of the credit for this apparent change in legislative sentiment must be attributed to the fact that the public, through the Association's public relations campaign, has been made aware of the fact that health insurance is available on a voluntary basis, without the need of establishing a state-operated bureaucracy.

7. *Revision of Constitution and By-Laws.*

In accordance with a 1947 resolution of the House of Delegates, the Council appointed a committee composed of one member from each Councilor district and one member named by each of the seven largest component county medical societies as a committee to consider revision of the existing Constitution and By-Laws. This committee has held meetings during the year and is expected to render a report to the 1948 House of Delegates. The members of this committee deserve the commendation of the Association for their sincere efforts in this arduous task.

8. *Prepayment Medical Care Plans.*

The Council adopted a resolution on September 20, 1947, reiterating a statement of principles for the operation of voluntary medical care prepayment plans as ethical procedures which was originally adopted in 1945. This resolution calls upon the component county medical societies to consider all prepayment plans in the light of this statement of principles and calls attention to disciplinary procedures available to the county societies in cases of infraction. The Council reprints herewith the 1945 statement of principles and again urges that all county societies and all Association members review these principles with a view toward determining if breaches are evident.

"It is in the public interest that the California Medical Association, representing the doctors of medicine practicing their profession in the State of California, publicly make known the principles which should form the basis of any health insurance program, and from which there should be no material deviation if the public welfare is to be properly and adequately protected. The public health and good medical practice are inextricably interwoven and interdependent.

"This statement is made with the understanding that the public is entitled to the best possible quality of medical service and access thereto. The medical profession must be in a position to render such service if the best interests of the public are to be served.

"The manifold and constant advances in the science and practice of medicine are put to public benefit only when they can be utilized by an alert and progressive medical profession. The public is entitled to profit by all scientific advances and the public welfare demands that the medical profession have complete scientific freedom in their application.

PRINCIPLES

"Any sound health insurance program should fulfill each of the following basic points:

"1. It is of primary importance that the people should be enabled to provide for the costs of illness on a regular budget basis during periods of good health and stable earning power, so that they may have a medical-economic security. It is vital, however, that the distribution of costs should be undertaken in a manner which will still guarantee the finest possible medical care and which will prevent any deterioration in the quality of medical service.

"2. To serve the ultimate public interest any health insurance plan must:

(a) Be voluntary and not compulsory in nature.
(b) Retain individual initiative in medical practice, so that the incentive for further advance in scientific medicine may continue.
(c) Fully protect the freedom of choice, both of the patient in choosing a physician and of the physician in choosing his community, type of practice and professional procedures.
(d) Offer medical care in cooperation with allied services against serious illness or injury.
(e) Offer participation at a cost within the means of all employed persons and income-receiving families, and
(f) Provide a fair reward to those rendering the service which will give continued stimulus to scientific medical development and sound medical practice.

"3. The function of state government should be to encourage voluntary health insurance programs but not regiment the patient and the medical profession or operate compulsory health insurance plans established by political means; to further this function, the state should cooperate with medical and allied professional groups to provide the availability of medical and associated care through acceptable prepayment plans in areas where a shortage of medical and hospital facilities exists.

"4. It is in the public interest that the human factor in medical care be thoroughly recognized; the sanctity of the patient-physician relationship must be maintained and the method of providing medical care must not become enmeshed in bureaucratic red tape and a system of tickets, coupons, questionnaires and other political controls and delays.

"5. It is essential for the public welfare that there exist in each state a complete inventory of all medical resources and facilities. It is in the public interest that a coherent and comprehensive educational program be undertaken, preferably by responsible authorities and the medical profession in a coordinated effort, to advise all the people of the state on the facilities and services available to them in the event of need and to encourage sound public health measures for the prevention of both accidental and non-accidental illnesses and injuries.

"6. There should be a coordinated program on the part of all groups concerned with this problem, directed to the extension of voluntary health insurance plans, so that our people may systemically provide for their health care on a budget basis."

9. *Blood Banks.*

During 1947 the Council adopted two resolutions covering the operations of blood banks and pointing out that the function of the American National Red Cross should be one of maintaining a donor and distribution service for the benefit of blood banks operated on a non-profit community basis, with blood and blood derivatives to be delivered at cost price. A resolution embodying these principles was in-

troduced into the January, 1948, meeting of the A.M.A. House of Delegates and resulted in the adoption by that body of more stringent requirements of the American National Red Cross in order to retain the approval in principle granted the Red Cross national blood bank program by the June, 1947, A.M.A. House of Delegates. The A.M.A. resolution now calls for competent medical supervision of all scientific aspects of blood procurement and processing and the establishment of an A.M.A. advisory committee to the Red Cross.

10. *Student Health Service.*

The Council has further considered during 1947 the provisions made by Stanford University to furnish medical care services to its students. The University has cooperated fully in meeting requirements requested by the Council, particularly as to providing free choice of physicians by the students, and no further discussion on this subject is now before the Council.

11. *Rebates of Fees and/or Charges.*

During the closing months of 1947 the Council devoted considerable time to the matter of rebates received by physicians from laboratories, pharmacists, supply houses, and other firms or individuals. This discussion included consideration of plans already announced by some civic organizations to discredit the entire medical profession by publicity releases which might well have an adverse effect on the public relations of the medical profession. The Council on December 21, 1947, adopted a statement reiterating the Association's conviction that a physician must receive fees only for the rendition of professional medical services and not from any other source and requesting the component county medical societies to take all steps necessary to abate any such practices where they were found to exist. This statement pointed out that this position was in keeping with established Association policies and also stated that such practices were being indulged in by only a small percentage of the membership, which percentage, however, cast a reflection on the entire profession. In a further statement along the same lines, the Executive Committee on January 13 and January 18, 1948, issued an additional reiteration of this policy, called upon the county societies to assure the discontinuance of all rebate practices and called upon civic groups to require as a condition of membership a statement from prospective members that they would not indulge in the granting of paying of rebates. These statements are in line with nationally-known policies of the A.M.A., which were mentioned in various California appearances by the editor of the Journal of the A.M.A. in January, and it is sincerely hoped that such practices will be completely stamped out in California. The Council requests that the House of Delegates reaffirm these actions by the Council and call upon the component county medical societies to take any steps necessary, including disciplinary action against members, to make this procedure completely successful.

12. *Revision of State of California Constitution.*

The Association was honored in 1947 by the appointment of Dr. John W. Cline and Mr. Ben H. Read as members of advisory committees to a joint Interim Legislative Committee to Study Revision of the Constitution of the State of California. The Council believes that these two representatives will be able to assure the proper consideration of the medical profession in any rewriting of the state constitution.

13. *California State Chamber of Commerce.*

The Association was also honored in the appointment of Messrs. Howard Hassard, Ben H. Read and John Hunton to a special committee on hospitalization appointed by the Social Security Department of the California State Chamber of Commerce. It is expected that the decisions of this committee will be in line with publicly-known Association policies in regard to free enterprise and local autonomy in the matter of hospital construction.

14. *California Medicine.*

The Council wishes to congratulate Dr. Dwight L. Wilbur on the marked progress shown by the official journal, California Medicine, during the past two years. The journal now occupies a position of extreme respect in all parts of the country and is becoming of increasing importance and interest to the members of the Association for whom it is primarily published. In appearance, editorial content, scientific material and all other departments, the journal has advanced tremendously in this period. In the business end of the journal, the Council has approved the withdrawal of the journal from the Cooperative Medical Advertising Bureau maintained by the A.M.A. and has appointed an advertising committee to supervise the acceptance of advertisements. This arrangement is expected to work out advantageously to the journal.

15. *California Tuberculosis and Health Association.*

The Council has appointed a liaison committee to work with the California Tuberculosis and Health Association in order to compose differences in programs between the two organizations. It is hoped that this committee will be able to assist in the formulation of a program acceptable to both organizations.

16. *Committee on History.*

The Council has approved the expenditure of necessary sums to assist the Honorary Historian, Dr. George H. Kress, to compile material for the proposed publication of the "History of the California Medical Association." The Honorary Historian is engaged in collecting material for this publication.

17. *Annual Session.*

The 1948 Annual Session has been arranged by the Committee on Scientific Work and has been approved by the Council. This year sees a departure from earlier precedent in that there are to be five guest speakers on the scientific programs and an additional guest speaker, Dr. George F. Lull, secretary and general manager of the American Medical Association, as a guest of the Association. The five guest speakers on scientific topics will be invited by the President of the Association, by the Sections on General Medicine and General Surgery, and (for the 1948 meeting) by the Sections on Anesthesiology and Dermatology and Syphilology. In future years the first three-named guest speakers will be continued and the other scientific sections, in alphabetical order, will be permitted two guest speakers at each annual session. The Council believes that this program will add interest to the annual sessions and will bring a wider range of speakers before the members of the Association.

18. *C.P.S. Fee Schedule Committee.*

The Council wishes to thank Dr. William L. Bender and his associates for the splendid work they did as members of the C.P.S. Fee Schedule Committee. The recommendations of the committee have been turned over to the Trustees of C.P.S., who have considered them and already acted on some. This committee has been continued and the Council believes its activities will benefit the entire profession in California. The commitee is privileged to report to the 1948 House of Delegates if it so desires.

19. *Revision of Constitution and By-Laws.*

In accordance with instructions given by the 1947 House of Delegates, the Council appointed a committee to consider revision of the Association's Constitution and By-Laws. This committee is now meeting and expects to have a report ready for presentation to the 1948 House of Delegates.

20. *Committee on Councilor District Redistricting.*

In accordance with instructions given by the 1947 House of Delegates, the Council appointed a committee to review the present Councilor Districts with a view toward possible redistricting. This committee is currently functioning and expects to have a report ready for presentation to the 1948 House of Delegates.

21. *Cancer Commission.*

The Council wishes also to express its appreciation to Dr. Lyell C. Kinney and the members of the Cancer Commission for their continued efforts to bring about an orderly and effective campaign to detect and treat cancer. The Cancer Commission has been extremely active throughout the year, has inaugurated a series of cancer studies in California Medicine which may later be reprinted in pamphlet form, and has arranged for the production of an up-to-date cancer film for medical educational purposes. The commission has cooperated with the American Cancer Society and the State Department of Public Health in promoting a sound, constructive program.

22. *State Department of Public Health.*

The Council has been pleased to have Dr. Wilton L. Halverson, State Director of Public Health, as its guest at meetings of both the Council and the Executive Committee throughout the year. Dr. Halverson has been most cooperative in matters of legislation, policy and program and his presence at meetings has done much to dispel doubts which had previously arisen regarding his department's programs.

The Council wishes to express its appreciation and thanks for the services rendered by committee members, appointed officers and office staff members throughout the year. Our Association is a large one which cannot depend on single individuals but must rely on the sincere efforts of a large number of members and it is a source of both gratification and pride that so many members will serve diligently in carrying out the programs and policies of the Association. Among these members, some of the most prominent are the officers of the component county societies, who serve without compensation and with great patience and diligence in interpreting California Medical Association policies to their own county society members. The entire Association owes them a debt of gratitude.

Particular thanks are due Dr. L. Henry Garland, who for the past two years has served without compensation as Secretary-Treasurer of the Association. His duties are continuous and arduous and always carried out promptly, effectively and with benefit to all Association members.

Respectfully submitted,
Edwin L. Bruck, *Chairman of the Council*

REPORT OF THE PRESIDENT OF THE TRUSTEES OF THE C.M.A.

To the President and the House of Delegates:

The Trustees of the California Medical Association have met during 1947 and transacted routine business only. The corporation is a holding company only, having as its assets the reserve funds transferred to the corporation from time to time by the Council of the Association. Membership on the Council and membership in the Trustees of the C.M.A. are identical.

The financial position of the Trustees of the California Medical Association is shown in the audited reports presented by the Treasurer of the Association as his report.

Respectfully submitted,
John W. Cline, *President*

REPORT OF THE SECRETARY

To the President and the House of Delegates:

Your Secretary has attended the meetings of the Council and all but one of those of the Executive Committee during the past year, in addition to other meetings such as those of the Legislative Committee, and Committee on Rural Health, the Cancer Commission and similar bodies appointed by the House. In accordance with the By-Laws he has also served as the Chairman of the Committee on Scientific Work and as a member of the Committee on Postgraduate Activities. The Committee on Scientific Works continues to be a major obligation. Its report will be found elsewhere in this issue. The postgraduate program of the Association is being reactivated on what we hope will be a worthwhile scale this year. Your Secretary worked with the committee and regards the Association as fortunate in securing the services of Dr. Carroll B. Andrews as director for the program. Dr. Andrews served as Chairman of the Committee on Rural Medical Service in 1947 and arranged an excellent program for the State Rural Health Conference held at Sacramento on December 6, 1947. Members are urged to read the roster of speakers presented at this important conference.

The minutes of the Council Meetings should be read by all informed physicians, inasmuch as they contain data on the work performed by your officers and committees throughout the year. Attention is also drawn to the reports of other State Associations in the field of improved medical service and public relations, notably to the Report of Public Relations of the Colorado State Medical Association issued in July, 1947. Two medical News Letters of informative value are now available to physicians, one published by Mrs. Shearon of Washington, D. C., and the other by Dr. W. Black of the A.A.P.S., Chicago, Illinois. Members could well subscribe to these letters, and inform their associates and lay friends concerning their contents.

Your Secretary wishes to thank the officers of the Association and the staff of the Association's office for their unfailing cooperation and assistance, especially Mr. Hunton, Miss Griffin and her successor, Mrs. Rooney.

Respectfully submitted,
L. Henry Garland, *Secretary*

REPORT OF THE TREASURER

To the President and the House of Delegates:

The duties of the Treasurer are handled by the Association's office staff and the books of the Association are audited each year by independent certified public accountants. Accordingly, the Treasurer's report is presented in the form of the audit performed by Hood & Strong, Certified Public Accountants, covering the period July 1, 1946, to June 30, 1947.

The audit report shows all income and expenditures for the above period, for both the California Medical Association and the Trustees of the California Medical Association, a non-profit corporation established some years ago as an organization to hold assets of the Association accumulated in the nature of a surplus. The report also shows a combined balance sheet of the Association and the Trustees as of June 30, 1947. Inasmuch as the combined showing of both organizations is essential to a complete understanding the Association's financial position, members are urged to study this balance sheet and the comparative figures for June 30, 1946, which are shown on it.

Respectfully submitted,
L. Henry Garland, *Treasurer*

CALIFORNIA MEDICAL ASSOCIATION
STATEMENT OF INCOME AND EXPENDITURE
July 1, 1946, to June 30, 1947

INCOME

Dues and General:		
Membership Dues—less portion allocated to "Journal" subscriptions		$798,225.50
Exhibitors at annual meeting		11,845.00
Interest earned		3,674.71
		$813,745.21
Official Journal—"California Medicine":		
Advertising	$ 71,923.54	
Members' subscriptions—allocated from dues	24,687.00	
Cash subscriptions	1,598.80	
	$ 98,209.34	
Total Income		$911,954.55

EXPENDITURES

Administrative	$106,880.19
Scientific, educational, and public relations	288,795.44
Official Journal—"California Medicine"	83,047.97
Total Expenditures	$478,723.60
Excess of Income over Expenditures	$433,230.95

TRUSTEES OF CALIFORNIA MEDICAL ASSOCIATION (A CORPORATION)
STATEMENT OF INCOME AND EXPENDITURES
July 1, 1946, to June 30, 1947

INCOME

Interest on bonds	$3,110.23
Interest on savings accounts	70.53
Miscellaneous	1.00
Total Income	$3,181.76

EXPENDITURE

Audit fee	$ 130.00
Miscellaneous	40.00
Total Expenditure	$ 170.00
Excess of Income over Expenditure	$3,011.76

CALIFORNIA MEDICAL ASSOCIATION
STATEMENT OF EXPENDITURES
July 1, 1946, to June 30, 1947

Administrative:		
Salary—Executive Secretary		$ 12,333.32
Salaries—other		13,309.71
Traveling expense:		
Secretary	$ 396.81	
Officers	55.06	
Council	3,864.46	
Executive Committee	415.59	
Delegates to A.M.A.	13,666.15	
		18,398.07
Taxes—Social Security		606.02
Annual meeting expense		13,567.12
Legal expense:		
Retainer fee	$ 6,000.00	
Other legal expense	5,204.38	
		11,204.38
Pensions		4,740.00
Office equipment purchased		3,055.14
Rent		6,188.85
Office supplies and expense		3,619.22
Postage		482.33
Telephone and telegraph		1,163.02
Council and Executive Committee expense		2,000.69
Contribution to the United Public Health League		15,169.11
Miscellaneous		1,043.21
Total Administrative		$106,880.19
Scientific, Educational, and Public Relations:		
Public Policy and Legislation expense		$ 46,971.24
Department of Public Relations		178,863.12
Department of Public Relations—C.P.S. Promotion		44,342.36
Physicians Benevolence		8,120.00
Cancer Commission		2,681.27
Other committee activities		3,757.45
Subscriptions to Medical Libraries		4,060.00
		$288,795.44
Official Journal—"California Medicine":		
Salaries		$ 8,912.50
Printing		62,554.50
Advertising commission		4,952.74
Postage, wrapping, and mailing		3,537.02
Illustrations		1,165.94
Supplies and office expense		1,314.08
Discounts and collection expense		264.15
Reprints		347.04
		$ 83,047.97
Total Expenditure		$478,723.60

CALIFORNIA MEDICAL ASSOCIATION AND TRUSTEES OF CALIFORNIA MEDICAL ASSOCIATION (A CORPORATION)
San Francisco, California

COMBINED COMPARATIVE BALANCE SHEET

ASSETS	CALIFORNIA MEDICAL ASSOCIATION	TRUSTEES OF CALIFORNIA MEDICAL ASSOCIATION	COMBINED JUNE 30, 1947	COMBINED JUNE 30, 1946	INCREASE (DECREASE)
Cash	$242,688.13	$ 10,402.32	$ 253,090.45	$395,494.37	$(142,403.92)
Marketable securities		700,000.00	700,000.00*	146,878.52	553,121.48
Accounts receivable	13,752.25		13,752.25	6,114.67	7,637.58
Loan receivable	10,500.00		10,500.00		10,500.00
Endowment fund		264.98	264.98	262.03	2.95
Benevolence fund	8,566.80	13,527.25	22,094.05	14,788.55	7,305.50
Trust fund	3,859.84		3,859.84	3,130.15	729.69
Furniture, equipment, etc.	1.00		1.00	1.00	
Deferred charges	850.49		850.49	758.64	91.85
Deposit—United Air Lines	425.00		425.00	425.00	
	$280,643.51	$724,194.55	$1,004,838.06	$567,852.93	$436,985.13
LIABILITIES					
Reserves and Surplus:					
Accounts payable	$ 23,008.56		$ 23,008.56	$ 14,535.59	$ 8,472.97
Members' contributions to Endowment fund		$ 264.98	264.98	262.03	2.95
Benevolence fund	8,566.80	13,527.25	22,094.05	14,788.55	7,305.50
Trust account	3,859.84		3,859.84	3,130.15	729.69
Reserve for loan receivable	10,500.00		10,500.00		10,500.00
Surplus	234,708.31	710,402.32	945,110.63	535,136.61	409,974.02
	$280,643.51	$724,194.55	$1,004,838.06	$567,852.93	$436,985.13

* These consist of United States Government Bonds, a summary of which is as follows:

	PAR VALUE	INTEREST RATE	DUE DATE
U. S. Treasury Bonds	$ 5,000.00	3⅛	1949-52
U. S. Treasury Bonds	10,000.00	2¾	March 15, 1948
U. S. Treasury Bonds	10,000.00	2½	1949-53
U. S. Treasury Bonds	15,000.00	2½	1964-69
U. S. Treasury Bonds	20,000.00	2½	1965-70
U. S. Treasury Bonds	39,000.00	2½	1966-71
U. S. Treasury Bonds	581,000.00	2½	1967-72
War Savings Bonds	20,000.00	2½	1956—12 Years
	$700,000.00		

REPORT OF THE EXECUTIVE SECRETARY

To the President and the House of Delegates:

The Executive Secretary, as in former years, presents his report in the form of paragraphs devoted to his several duties, for the convenience of the House of Delegates and the reference committee which will consider the report.

1. *General.* The office has remained in the same location during 1947 and in the same space reported a year ago. The office staff has been increased by two new employees since last year, a new clerk and an advertising manager of the official journal. There are now three men and five women employees in the office, in addition to the Executive Secretary. Space is also provided for the director of postgraduate activities while he is in the office and facilities are provided for officers and committees.

Office equipment is in excellent condition and new items have been added as they are demanded by a growing membership. In this connection, the Executive Secretary recalls that a little more than seven years ago, when he started his employment with the C.M.A., the membership was just about two-thirds what it is today. The increase of 50 per cent in membership during this period has brought about new problems and has required the establishment of new systems and employment of additional equipment. At present the office is equipped to give every service to the members, officers, committee members and others who have need to call for assistance.

2. *Meetings.* The Executive Secretary has attended all meetings of the Council and Executive Committee, has attended meetings of the C.P.S. Board of Trustees as liaison for the Association, has presided over the meetings of the Advisory Planning Committee, has attended the two meetings of the A.M.A. House of Delegates, and participated in the A.M.A. Secretarial Conference. In addition, he has served as executive secretary of the United Public Health League and has more recently been honored by election as secretary-treasurer of the Conference of Presidents and Other Officers of State Medical Associations. Some of these meetings overlap or occur at connected dates, which makes it possible to cover the ground without taking too much time away from the Association office.

The Executive Secretary has also visited various California counties in response to invitations from officers and county medical societies.

3. *Financial.* The Association's finances were in excellent condition at the close of 1947 and continue so in the early months of 1948. At the end of the last calendar year there was $700,000 in reserve in U. S. Government bonds held by the non-profit corporation, Trustees of the California Medical Association. There was another $100,000 in cash in current accounts, available for further investment in the judgment of the Council.

The auditor's report for the fiscal year ended June 30, 1947, is printed under the Treasurer's report and is self-explanatory. Taking these figures for the first half of 1947 and the Association's own (unaudited) book figures for the second half of the year, several comparisons are possible.

For the calendar year 1947 the Association showed total revenues of $923,818, compared with $652,791 in 1946. The increase is attributable to an increase in dues received from all members, including many who had been in military service and enjoying a waiver of dues a year earlier. Additional increases in revenues resulted from higher advertising sales for the official journal and from miscellaneous sources, principally space sales at the annual session.

Expenditures for the year were $462,783, leaving a surplus of $461,035 for the year. The bulk of this amount was invested in U. S. Government bonds, which were then transferred to the Trustees of the California Medical Association. The bond account increased from $294,000 to $700,000 during 1947.

The Association's journal, California Medicine, suffered a loss in 1947, with revenues of $72,347 and expenses of $91,426. On a comparative basis, 1946 revenues were $69,755 and expenses were $57,349. Percentagewise, 1947 revenues were 3.7 per cent higher than 1946 and expenses were 59.4 per cent higher. Printing costs alone increased 55.3 per cent, from $42,291 to $65,698, reflecting higher paper and labor costs as well as increased circulation and higher costs of everything which goes into making the journal.

In response to various inquiries, the Executive Secretary wishes to set forth in this report the manner in which the Association's books are kept insofar as the journal is concerned. Revenues shown for the journal are cash revenues derived from advertising, subscriptions and reprint sales. Expenses shown are those directly chargeable to the journal, including printing and mailing costs, illustrations, advertising sales expense, postage, office supplies and the salaries of the Editor and his assistant. No clerical salaries are charged against the journal, nor is any general office overhead or rent so charged. Similarly, no subscription revenues from C.M.A. members are shown as credits to the journal. The figures shown in the preceding paragraph indicate a sizable out-of-pocket loss on the journal for last year; on the other hand, on a strict cost accounting basis, if C.M.A. members' subscriptions were shown as credits and all direct and indirect office expenses were shown as journal expenses, the magazine would be on about an even financial keel for 1947. In the long run there is no difference to the Association—money may come from one pocket to go into another—but these facts are stated for the benefit of those interested. The Association is striving to present to its membership a well edited, well prepared and printed magazine, with the best possible scientific and organizational material, displayed in a readable style. From numerous comments received by Association officers, it seems obvious that these aims are being attained.

4. *California Medicine.* Several comments concerning California Medicine appear in the preceding section of this report. In addition, it should be reported here that the size of the finished magazine was increased during 1947 from 7¾ by 10¾ inches to 8 by 11 inches. This makes the journal the same size as many other state journals and provides wider margins on the text and advertising pages. There are some advantages to the larger size in the advertising pages but the principal advantage is in greater clarity and easier readability in the text pages. The larger page size has meant a larger paper sheet for printing, with an increase in cost because of the added tonnage. In the addition to this increase, there have been increases in printing and distribution costs, and the allowance for illustrations has been adjusted upward in order to permit better illustrations for scientific articles.

In the latter part of 1947, California Medicine withdrew its membership in the Cooperative Medical Advertising Bureau, a department of the A.M.A. which furnishes advertising representation to various state medical journals. Instead, a new advertising manager, Mr. Herbert A. Dady, was employed to give full time to the sales of the journal. Mr. Dady is an experienced advertising man and has already brought in various new accounts which heretofore have not been among the journal's advertisers. He makes his headquarters in the Association office and covers the entire country by correspondence and telephone, augmented by two eastern trips annually and local visits in California.

The employment of an advertising manager, together with an increase in advertising rates, effective late in 1947, is expected to improve the financial position of the journal and to provide a closer supervision of its business. Advertising standards have been maintained on a high level, with a committee of Association members serving as censors for advertising of products and services not already bearing an A.M.A. seal of acceptance.

At the A.M.A. secretarial conference late in 1947, California Medicine was selected as one of the four state journals to be analyzed in a "clinic" session of publishing experts. While there was adverse as well as complimentary criticism of the journal, it is safe to say that the overall impression gained by these experts was mainly commendatory. Credit for this goes to the editor and his assistant, Mr. Robert F. Edwards; the Executive Secretary exercises little beyond supervisory services to the journal, plus assistance when requested in the preparation of both advertising and text material.

5. *Public Policy and Legislation.* Last year was a legislative year and the Executive Secretary was called upon to assist in this important work. His functions were principally in San Francisco, with a few visits to Sacramento. In the main, he acted to carry out the wishes of the committee and to cooperate with legal counsel, legislative representative and public relations counsel in working for the Association's legislative program.

Along similar lines, the Executive Secretary has continued to serve as Executive Secretary of The United Public Health League, which operates as a federation of western state medical associations which maintains an office in Washington, D. C. This work entails the preparation and distribution of a letter report from time to time and general administrative duties which fit in nicely with the Association's work and do not impinge on Association time.

In June, 1947, the Executive Secretary was elected Secretary-Treasurer of the Conference of Presidents and Other Officers of State Medical Associations, a national group which holds annual meetings and serves to prepare various proposals for the consideration of the A.M.A. House of Delegates. This function is destined to be a temporary one, inasmuch as the office involved is by custom rotated about every two years, and the work was undertaken with the knowledge and consent of the officers of the Association.

6. *Public Relations.* The Executive Secretary has cooperated during the year with the public relations counsel in the planning of public relations activities, checking of budgets, assisting in preparing news releases and in various other ways. Public relations counsel has taken over the complete public relations program of the Association, under direction of the Council, so that the office work in this respect is minimized.

7. *Advisory Planning Committee.* The Executive Secretary has served as chairman of this committee throughout the year and the recommendations and discussions of the committee have been published as a part of the Council minutes. This committee acts under the direction of the Council and has authority only to present recommendations to the Council, which may act in its discretion on such proposals. The committee has been asked in the past year to work with the standing Committee on Medical Economics in surveying individual physician-patient relationships and is prepared to work similarly with other committees. The Advisory Planning Committee now includes the Executive Secretary, the Legal Counsel, the Executive Secretary of the Public Health League of California and the Executive Secretaries of county medical societies in Los Angeles, San Francisco, Alameda, Santa Clara, San Diego and Kern counties.

8. *Annual Session.* The 1948 Annual Session has been arranged for San Francisco, where the facilities are adequate to handle a large meeting, albeit in several neighboring hotels and theaters. There will again be technical exhibits, for which the exhibitors pay rentals which in great measure defray the cost of the session. Members are urged to visit these exhibits and show their appreciation to the exhibitors and their representatives.

9. *Conclusion.* The Executive Secretary wishes to take this opportunity to express his personal thanks and appreciation to the officers, councilors and committee members of the Association, the officers of the county medical societies and, by no means last, the entire office staff. The manifold duties in the Association office call for a high degree of teamwork for successful operations and the staff members seem always to deliver the necessary effort at the proper time. To them must go the credit for whatever the office has been able to accomplish for the benefit of the entire membership.

Respectfully submitted,

John Hunton, *Executive Secretary*

REPORT OF THE EDITOR

To the President and the House of Delegates:

During the past year every attempt has been made to keep California Medicine at a high standard as the official journal of the C.M.A. The number of scientific and original papers which has been published has increased considerably. A number of excellent symposia presented at the annual meeting of the Association in 1947 have appeared in print and have added considerably to the good material published in the journal. Through the persistent efforts of Robert Edwards, Assistant to the Editor, almost all the papers presented at the annual meeting in 1947 were submitted to California Medicine for publication. In addition to this source of material a large number of manuscripts has been submitted directly to the editorial office. Unfortunately it has not been possible to publish all of them owing to the highly technical aspects of some of them with consequent limited audience interest, and to the limitation of space.

Since July, 1947, beginning Volume 67, the journal has been published in San Francisco, which has simplified many problems and permitted delivery of the journal during the month in which it is due.

With the development of the Public Relations News published by direction of the Council of the C.M.A. and of the C.P.S. Progress, both of which cover much of the activity of organized medicine in the C.M.A. and in C.P.S., the need for extension of those portions of California Medicine having to do with organized medicine and socio-economic problems has been less.

Clinical Conferences, articles on Medical Progress and Clinical Pathological Conferences have been a distinct addition to California Medicine. Thanks are due to Dr. Edgar Wayburn for his great help in obtaining material for the section on Clinical Conferences.

In the past year a series of articles on Cancer obtained through the Editorial Committee of the Cancer Commission has been published. It is planned to have these appear eventually in a cancer manual.

It is hoped that members of the C.M.A. will more frequently than in the past use the sections of Letters to the Editor, News and Notes and Anti-Spasmodics to bring lively subjects to the attention of readers of the journal.

Finally, great thanks are due to the members of the Editorial Board, to the Executive Committee of the Board and to many physicians who have written Book Reviews, for the valued assistance in making the editor's task more simple and the caliber of California Medicine representative of a great state medical association.

Respectfully submitted,

Dwight L. Wilbur,
Editor, California Medicine.

REPORT OF LEGAL DEPARTMENT

To the President and the House of Delegates:

The Legal Department submits the following report covering the period from the last session of the House of Delegates to the end of January, 1948, the time of the preparation of this report.

During the year our work has, as in past years, involved preparation and rendering of opinions to the Association, to various county medical societies, and to committees and members of the Association on various matters.

We have attended all meetings of the Council, Executive Committee, Committee on Public Policy and Legislation, Advisory Planning Committee, and in addition have attended meetings of other standing and special committees.

With the extension of the activities of the Association in recent years, the work of this department has of necessity increased, and the variety of legal problems affecting the Association has likewise grown.

There are a number of matters of great interest to the welfare of the profession that have taken a great deal of our time during recent months, but which should not appear in a published report as, in each instance, they involve the professional relationship of attorney and client. It is our request that we be permitted to supplement this report orally at the next session of the House of Delegates, at which time a complete review of current legal matters affecting the Association will be presented.

In closing, we wish to express our constant desire to serve the medical profession to the best of our ability.

Respectfully submitted,

PEART, BARATY & HASSARD,
General Counsel.

REPORTS OF DISTRICT COUNCILORS

FIRST COUNCILOR DISTRICT

Imperial, Orange, Riverside, San Bernardino and San Diego Counties

To the President and the House of Delegates:

Since being elected to the Councilorship of the First District last May, I have attended all of the meetings of the Council.

In addition to carrying out the instructions of the House of Delegates, and the rather complex business of the California Medical Association, a definite plan is now in the process of being carried out to correct evils of rebates to physicians from laboratories, optical companies, supply houses, and others serving the medical practice.

The tremendous influx of new physicians continues in each of the counties of the district. The recent attack on the physicians in Orange County for failure to answer emergency calls unfortunately received national publicity in the press and on the radio. When investigated, the allegations that 24 doctors had been called and 24 refused to see a man at the time of his death, and that he was finally pronounced dead by a mortician, were found to be absolutely untrue. There is, and has been at all times, adequate coverage for emergency calls. It is regrettable that the truth of the situation did not receive the same publicity that did the unjust charges.

The more serious problems remain the lack of sufficient hospital space and facilities, and graduate nurses. Our supply of physicians is now adequate.

Attendance at meetings and increase in interest of our ever-increasing problems are especially gratifying.

Respectfully submitted,

JOHN D. BALL, *Councilor,*
First District

SECOND COUNCILOR DISTRICT

Los Angeles County

To the President and the House of Delegates:

Your Councilor for the Second District has attended all of the California Medical Association Council meetings for the past year, the minutes of which have been published in CALIFORNIA MEDICINE at regular intervals for your study.

Inasmuch as the Council members receive their instructions from the House of Delegates and their constituents in each Councilor District, it is imperative that all members of the California Medical Association make a special effort to attend each annual session of the House of Delegates. Many men attend the scientific sessions and pass over the interesting work which is done each year by the House of Delegates. It is preferable to get first-hand information at the time the House of Delegates is in session, rather than to depend upon someone to write a full account of the proceedings, so again I am urging each California Medical Association member to attend not only the scientific sessions, but the meeting of the House of Delegates, at which they will be very, very welcome.

Again this year the Councilor for the Second District (Los Angeles) has endeavored to carry out the instructions and the wishes of the House of Delegates and of his constituents in Los Angeles County.

Respectfully submitted,

JAY J. CRANE, *Councilor,*
Second District.

THIRD COUNCILOR DISTRICT

Kern, San Luis Obispo, Santa Barbara, Ventura and Inyo-Mono Counties

To the President and the House of Delegates:

The component societies of the Third Councilor District are all in good condition with active memberships and regular meetings.

One component society has acquired an executive secretary since the last report, and a very good program is being developed.

There are a few areas in the District where additional personnel could be used.

Respectfully submitted,

H. E. HENDERSON, *Councilor,*
Third District

FOURTH COUNCILOR DISTRICT

Fresno, Madera, Kings, Tulare, Merced, Mariposa, Calaveras, San Joaquin, Tuolumne, and Stanislaus Counties

Earnest efforts on the part of the Councilor have been made to inform the membership of the urgent importance of promoting improved public relations. Honest, efficient medical service to the patient, a sympathetic personal interest in the problems of the patient, and never fees for services in excess of ability to pay, have been stressed as the best ground work for a better attitude of the public toward the profession.

One County Society in the district is now considering the employment of an Executive Secretary who will give an impetus to friendly relations between individual physicians and patients.

No disturbing organization problems have required attention.

The duties of the Councilor have been given due consideration and attention.

Respectfully submitted,

A. E. ANDERSON, *Councilor,*
Fourth District

FIFTH COUNCILOR DISTRICT

Monterey, San Benito, San Mateo, Santa Cruz and Santa Clara Counties

To the President and the House of Delegates:

The county medical societies in the Fifth Councilor District have been most active this last year in an attempt to increase the number of hospital beds in their respective areas. In Santa Clara County, the San Jose Community

Hospital and the O'Connor Hospital, both located in San Jose, have put on extensive drives and it seems likely that 400 new beds will be available in this community within a short period of time. San Mateo County has voted in two hospital districts, the Sequoia Hospital Group and the Peninsula Hospital District, and several hundred beds are in the offing in San Mateo County. At Watsonville in Santa Cruz County, a new wing was added to their hospital. More beds were made available in Santa Cruz and there are prospects for additional ones.

Numerous constructive meetings with C.P.S. representatives have been held throughout the District.

In Santa Clara County plans for a community blood bank have been completed in which the county medical society in conjunction with the Red Cross, has set up a splendid program.

This is my last term as Councilor of this District. In retiring I wish to thank the county societies in the district for their cooperation and I want them to know I have appreciated their help and it has been a pleasure to serve them during my term of office. I hope my successor will enjoy meeting and working with the men in the District as I have, and will receive the same splendid assistance that has been given to me, so that the understanding and friendship between these component societies may be further strengthened to the end that the medical profession generally may be benefited.

Respectfully submitted,

R. S. Kneeshaw, *Councilor,*
Fifth District.

SIXTH COUNCILOR DISTRICT

San Francisco County

To the President and the House of Delegates:

During the past year, acting as Councilor of the Sixth District in San Francisco, I have attended all of the meetings of the Council of the California Medical Association save one day of the Council meeting in December when I was ill.

During the past year much of importance has happened in San Francisco County.

Probably not the least important is the fact that the San Francisco County Society has finally broken with the Health Service System of San Francisco, which system is a compulsory health insurance system in which all of the employees of the City and County of San Francisco are compelled to participate.

The situation became so intolerable that action finally had to be taken and at the date of the writing of this note, no settlement has been reached.

The San Francisco County Medical Society has grown and at the present time the membership stands at 1,375.

During the past year the San Francisco County Medical Society has embarked on a program of personal relations with the patients of the members of the County Society in that the Economic Bureau attempts to make adjustments in fees, try to collect delinquent accounts and do many other things in an attempt to promulgate better relations between patient and doctor.

Members of the San Francisco County Medical Society were called upon on more than one occasion during the year of 1947 to appear in Sacramento to fight compulsory health insurance in the Legislature.

Many preparations are being made for the centennial years of 1948, 1949 and 1950 by the San Francisco County Medical Society, to include the entertainment in San Francisco of the California Medical Association in 1948, the American College of Physicians in 1948, and the American Medical Association in 1949.

Respectfully submitted,

Edwin L. Bruck, *Councilor,*
Sixth District

SEVENTH COUNCILOR DISTRICT

Alameda and Contra Costa Counties

To the President and the House of Delegates:

The past year has seen the over-all plans in relation to medical economics initiated by the Alameda County Medical Association in 1945 reach their completion. The composition of the complete program is made up of several groups, each of which is functioning at present.

1. Voluntary health insurance
2. Bureau of Medical Economics
3. Fee Complaint Committee
4. Ethics Committee

These departments, plus the facilities of the County and State, can give adequate medical care to everyone. Adjustment of medical cost ranging from indigent to full pay is provided for. Injustices perpetrated by a small minority of physicians also are brought under scrutiny.

Any problem, professional or economical, can be solved. The Alameda County Medical Association is well into actually carrying out the above plan. At this time monthly ads appearing in newspapers offer full guarantee of medical care for everyone.

The Contra Costa Medical Association is an integral part of the plan. The members utilize the Bureau of Medical Economics and participate in the malpractice and the health and accident insurance program. They also receive the A.C.M.A. bulletin.

The Malpractice Insurance Program which started early in 1946 has proved most successful. The premium rate has dropped more than 20 per cent below the original rate which at the onset was well below the prevailing commercial rate. To date, not one cent has been paid on any claim. The Malpractice Insurance Program has resulted in a saving of $40,000 in the past year to members of the Alameda County Medical Association.

The Blood Bank of the Alameda County Medical Association, which also serves Contra Costa County, deserves mention. It has never been necessary to refuse blood of any type or amount when requested. In no instance has an individual been required to pay if such payment would render a financial hardship to the patient.

Respectfully submitted,

Donald D. Lum, *Councilor,*
Seventh District

EIGHTH COUNCILOR DISTRICT

Alpine, Amador, Butte, Colusa, Eldorado, Glenn, Lassen, Modoc, Nevada, Placer, Plumas, Sacramento, Shasta, Sierra, Sutter, Tehama, Yolo and Yuba Counties

To the President and the House of Delegates:

Since the Legislature has been in session in Sacramento during the past year there has been an increase in the duties of the councilor for this district. Many of the legislators and their families require medical advice and treatment while away from home and the physicians in Sacramento attempt to furnish this assistance when requested by the local councilor. In addition, we cooperate actively with the legislative committee of the California Medical Association in supplying speakers at various Senate and Assembly hearings which deal with problems of importance to medicine.

During the latter part of this year I visited many of the county medical societies in this district and discussed with them various medical problems with special emphasis upon the public relations aspect of medical practice. There is a growing realization in this district of the importance of public relations to the future of medicine and a healthy respect for any suggestions which will increase the prestige of medical men in the public estimation.

Respectfully submitted,

Frank A. MacDonald, *Councilor,*
Eighth District

NINTH COUNCILOR DISTRICT

Del Norte, Humboldt, Lake, Marin, Mendocino, Napa, Siskiyou, Solano, Sonoma, and Trinity Counties

To the President and the House of Delegates:

During the year 1947 your Councilor has visited the following counties: Marin, Napa, Solano, Sonoma, Humboldt and Siskiyou.

The latest visit was in November at Weed, California, where Dr. D. H. Murray and I spent three hours with seven members of the Siskiyou County Society discussing the whole A.M.A. and C.M.A. programs with the members present. Many questions were asked and answered concerning C.P.S. and the building of hospital beds. There is still a scarcity of doctors in this area, as well as hospital beds.

The Humboldt County meeting was a total loss because the speaker was delayed on the highway so many times and for as long as half an hour by road-blocks that he failed to arrive in Eureka until 9:45 p.m. In the meantime the members got tired and following a nice dinner went home.

A four county meeting on July 16, at the Meadow Country Club at Fairfax, California was well attended and was preceded by a golf tournament. At dinner, President John Cline, John Hunton, Hap Hasard, Ben Read and Dr. D. H. Murray were the principal speakers, aided and abetted by Clem Whitaker who explained our entire public relations program. Even Councilor Stanley Kneeshaw of San Jose and Councilor Gordon McLean of Oakland indulged in our successful evening. Counties represented were: Napa, Sonoma, Marin and Solano. Marin County Medical Society acted as host.

We still have a problem which was mentioned last year and year before. Namely, Dr. Sidney Garfield and Associates. We do not need these men in Solano County because we have had a large influx of doctors practicing private medicine. Vallejo General Hospital, which is strictly private, is extending its operative facilities, departments, and bed capacity so 100 beds will be available instead of 65, during the year 1948.

Sonoma County and Marin County are in the midst of a campaign for more beds and better hospital facilities.

On the whole, 1947, was quite a satisfying year to all.

Respectfully submitted,
JOHN W. GREEN, *Councilor,*
Ninth District

REPORTS OF COUNCILORS-AT-LARGE

To the President and the House of Delegates:

As Councilor-at-Large I have attended all meetings of the Council of the California Medical Association. It has been a great pleasure to take an active part in the deliberations of this body.

I have also attended the Council meetings of the Alameda County Medical Association, in order to correlate the work of both State and County organizations.

It was my privilege to attend the Annual Meeting of the combined Medical Associations of Marin, Sonoma and Solano Counties.

Respectfully submitted,
H. GORDON MACLEAN, *Councilor-at-Large*

To the President and the House of Delegates:

This is my first year on the Council as I was appointed to serve during the unexpired term of Dr. Louis J. Regan.

The work of the Council continues to grow in scope and magnitude. The foremost problem in our minds today is the continued support of voluntary prepaid medical care. It is becoming more and more apparent that this can be accomplished only by the absolute uniting of the profession as a whole as factionalism has no place in the California Medical Association.

Respectfully submitted,
EUGENE F. HOFFMAN, *Councilor-at-Large*

To the President and the House of Delegates:

I have attended all of the meetings of the Council during the past year. Serious thought and judicious consideration has been given by the Council to all items of business. Full and free debate of all pertinent phases of the medical problems throughout the state have, I believe, resulted in proper decisions.

The medical profession must continue to assume a unified, militant stand in upholding freedom from overwhelming political and bureau controls. We must maintain and continue positive steps to assure that appropriate legislative measures be written, and equally important, is to prevent inappropriate legislation from being foisted upon the public.

It is the duty of the California Medical Association to take the lead in ridding the profession of unethical practices where such exist, of fee splitting, or giving or accepting rebates. Failure to do so can very properly cause the buying public to lose confidence.

California Physicians' Service, although not yet perfect in the eyes of all men, is exploring the way to provide prepaid medical service to a large segment of the population. Many honest and hardworking people are giving it much thought and planning. It appears to be on the road to self-sustenance. It deserves continued support.

Not one of us in the California Medical Association must overlook the concept that the best interests of the medical profession and of the public are one and the same statewide.

Respectfully submitted,
C. V. THOMPSON, *Councilor-at-Large*

To the President and the House of Delegates:

As one of your Councilors-at-Large and Chairman of the Executive Committee I have regularly attended the meetings of the Council during the past year. The more frequent meetings of the Council have been extremely useful in enabling this body to deal more effectively with the many problems which have arisen. Meetings lasting two days have been found to be necessary.

As many of you know, the Council has been under fire. From my personal experience, however, I am convinced that the welfare of the Council of the California Medical Association as a whole has been foremost in the minds of every councilor and that none has spared himself in order to further the legitimate ends of organized medicine.

Respectfully submitted,
SIDNEY J. SHIPMAN, *Councilor-at-Large*

To the President and the House of Delegates:

As one of your Councilors-at-Large, I have attended all regular and special meetings of the Council, and a number of the component County Societies.

I am interested in and have worked for the advancement of organized medicine in the state and endeavored to promote cooperation among its members.

Respectfully submitted,
WALTER S. CHERRY, *Councilor-at-Large*

To the President and the House of Delegates:

By far the most important problem during the year has been obtaining vigorous action to outlaw secret rebates and commissions. For more than ten years the Council of the Los Angeles County Medical Association has been confronted with the problem of rebating and has passed innumerable resolutions against all such practices in any guise or pretext whatsoever, all to little effect.

It is to the public interest that we should set up a workable code of ethics with provisions in it which will enable

us promptly to sever our connections with any members who do not live up to our code of ethics. As noted in the Rich report, the problem of the "erring brother" and the fact that he often gets away with it, is a sore point with other physicians and is a very serious matter from the standpoint of public relations. Unless we have a system of discipline which actually functions, the dishonorable acts of a few can discredit the many in the eyes of the public.

Respectfully submitted,

WILBUR BAILEY, *Councilor-at-Large*

REPORT OF THE EXECUTIVE COMMITTEE

To the President and the House of Delegates:

Your Executive Committee has held several meetings as occasion demanded to deal with urgent matters which could not wait for regularly scheduled meetings of the Council. The minutes of such meetings have been presented to the Council for approval and have been subsequently published. In general, it has been the aim of the Executive Committee to limit as far as possible the burden of work of the Council itself and to filter the essential from the non-essential matter which might otherwise occupy the Council's time.

The Executive Committee has attempted to be of service to C.P.S. It has been extremely interested in the reports which C.P.S. has presented and wishes to congratulate the officers of C.P.S. on their excellent program.

Respectfully submitted,

SIDNEY J. SHIPMAN, *Chairman*

AUDITING COMMITTEE

To the President and the House of Delegates:

The Auditing Committee has performed the functions laid down in the By-Laws. The professional audit of the Association's books showed them to be in order and the Committee has submitted its recommendations for the 1948 budget.

Respectfully submitted,

SIDNEY J. SHIPMAN, *Chairman*

COMMITTEE ON PUBLIC POLICY AND LEGISLATION

To the President and the House of Delegates:

Until the last sound of the gavel of the 1947 Legislature the threat of Compulsory Health Insurance was constantly over us. It was indeed gratifying to be relieved of this threat by the adjournment of the Legislature.

Owing to deaths and resignations there existed three vacancies in the Senate and three in the Assembly. These vacancies were filled by men elected at elections specially named by the Governor. Your Legislative Committee was interested in these elections as some of the candidates were very progressive, forward-looking men who desired the best for public health. In at least five of the elections such type of men won. Your Legislative Committee is now considering various candidates for our State Legislature and National Congress.

Although the Legislature is to convene on the First Monday in March, supposedly for financial purposes it will be necessary to keep in touch with the legislators during this session.

Your Committee wishes to thank the officers and many, many members of the California Medical Association, and the Woman's Auxiliaries for their untiring efforts in assisting us at all times.

Respectfully submitted,

D. H. MURRAY, *Chairman*

COMMITTEE ON HEALTH AND PUBLIC INSTRUCTION

Executive Group

George M. Uhl, Chairman, 1949
C. M. Burchfiel, 1948 Orrin Cook, 1950

To the President and the House of Delegates:

The Committee on Health and Public Instruction has attempted to keep in touch with health activities concerning practicing physicians, public health officials, and the general public. While no formal meetings have been held during the past year, the Committee stands ready at all times to assist the Association in the field of health education.

Respectfully submitted,

GEORGE M. UHL, *Chairman*

COMMITTEE ON HISTORY AND OBITUARIES

Executive Group

Morton R. Gibbons, Sr., Chairman, 1947
Robert A. Peers, 1948 E. T. Remmen, 1949
George H. Kress, ex officio

To the President and the House of Delegates:

The Committee again urges the organized county units of the County Medical Association to gather medical historical material.

At this particular time in California's history such research should be easier than it will ever be again.

In some areas commendable work has been done. Attention is invited to the very praiseworthy "History of the Alameda County Medical Association" by Milton Henry Shutes—an amplification and extension of the work of Frank H. Makinson.

A similar interesting volume could be prepared of the medical history of many counties of the state and would preserve valuable material which otherwise will be lost.

Respectfully submitted,

MORTON R. GIBBONS, SR., *Chairman*

COMMITTEE ON HOSPITALS, DISPENSARIES, AND CLINICS

Executive Group

Carroll B. Andrews, M.D., Chairman, 1950
Clarence E. Reese, 1948 Anthony J. J. Rourke, 1949

To the President and the House of Delegates:

The application of the Hill-Burton Bill and its concomitant state legislation to California hospital organization and construction has continued to receive consideration. Upon the advice of the C.M.A. Council arrangements have been made for action by a joint Committee, composed of a representative from the Association of California Hospitals and the Chairman of the Committee on Hospitals, Dispensaries and Clinics, to study and make recommendations regarding the location, operation and staffing of such new hospitals as might be instituted under the Local Hospital District Law. A tentative list of recommendations is to be presented to the Council. Efforts have been made to keep in close touch with local and state hospital organizations and the Bureau of Survey of California Department of Public Health.

Respectfully submitted,

CARROLL B. ANDREWS, *Chairman*

COMMITTEE ON PUBLICATIONS

To the President and the House of Delegates:

The business and editorial departments have done their work so well there has been little for the Publications Committee to do in 1947.

Respectfully submitted,

GEORGE W. WALKER, *Chairman*

COMMITTEE ON INDUSTRIAL PRACTICE

To the President and the House of Delegates:

The Committee on Industrial Practice has had no formal meetings. During the year there has been considerable discussion of a revision of the Fee Schedule for the Industrial Accident Commission. On the date of writing this report, a considerable amount of data has been forwarded to this Committee for consideration.

There will be a recommendation made to the House of Delegates or to the Council before the annual meeting as to the results of this conference on Fee Schedules.

This will be presented to the Council and, if it is their desire, will be presented to the House of Delegates as an amendment to the report.

Respectfully submitted,

DONALD CASS, *Chairman*

COMMITTEE ON MEDICAL EDUCATION AND MEDICAL INSTITUTIONS

Executive Group

B. O. Raulston, Chairman, 1950

L. R. Chandler, 1948 Francis Scott Smyth, 1949

To the President and the House of Delegates:

The Medical Schools of California, and of the entire United States must meet again the task of selecting students for the freshman classes in 1948. A number of factors contribute to the increasing problems involved in this process. Statistics are not available but from all indications there are approximately four academically qualified applicants for each of the places in the freshman classes. This takes into consideration duplication of applications. The function of the committee on selections is to accept those students who give the greatest promise of completing the Course of Medical Education, and of making the best use of their training in the practice of Medicine, Research or Teaching. Scholastic ability, aptitude and personal fitness are the important factors to be considered.

Because of the recent war larger numbers of students who were preparing for medical school were taken into military service. Some of these were permitted to continue their original plans in schools to which they were assigned; many others were directed into other channels. Also many students who were taken into military service before they had definitely decided upon a career, because of their military experiences selected medicine as their desired profession. Following the war these groups of students have returned to college with renewed interest and increased determination. They have made conspicuously good academic records in college; they have provided a powerful influence for good morale; they deserve much praise and consideration. Their situation enters heavily into the selection of students for any professional school. The sacrifice that has been made by these students cannot fail to give them some degree of priority when selections are to be made for continued training.

No one can fail to recognize the importance of wise selection of medical students. Anyone who has served on a committee for selection of such students can write or expostulate at great length upon the process and its importance.

Plans for the development of a School of Medicine in the University of California at Los Angeles constitute the most important change in medical education in the state. According to certain announcements the school will be developed almost entirely on the campus at Westwood. Dr. Stafford Warren has been appointed dean and a few appointments to the clinical faculty have been made. With adequate financial support from the state this school should develop into one of great importance; the opportunity for rendering service to the community in which it is to be located, and to the entire country is indeed great.

Requests for refresher and review courses, and for postgraduate training in general continue to exceed the facilities available for such instruction. What the future of this type of training may be is necessarily a great question. While there is undoubtedly a close relationship between present demands and federal support, it may be that doctors, on their own, will support the right kind of graduate training indefinitely: it was true in Austria to the time of World War I!

In California there are three Veterans' hospitals operating in conjunction with committees from the five medical schools in the state. The plan is to raise the standard of patient care, instruction of house staff, and eventually research work, to the level found in university hospitals. Within the short time in which this program has been in operation great progress has been made. Of first importance has been the quality of care of patients; next the provision of training for larger numbers of Veteran doctors who otherwise could not have had such opportunities. Therefore, for patients, for house staff and for attending staff there has been an important step forward. It is our sincere hope that this progress may continue.

Respectfully submitted,

B. O. RAULSTON, *Chairman*

COMMITTEE ON MEDICAL ECONOMICS

Executive Group

H. Gordon MacLean, Chairman, 1948

Howard W. Bosworth, 1949 Dell T. Lundquist, 1950

To the President and the House of Delegates:

The 1947 House of Delegates and the Council of the California Medical Association instructed the Committee on Medical Economics to study the following problems:

1. Prepaid health insurance plans.

2. Medical Economic relations between patients and individual physicians of California.

3. The purposes, objects and methods of the Bureaus of Medical Economics as set up by County Medical Associations in the San Francisco Bay Area.

The Committee has had many meetings and has gone over a large amount of material, including the entire file of the Chandler Committee of 1946 on prepayment health insurance. It has corresponded and held discussions with executives of California Physicians' Service and leading prepayment plans throughout the United States, and will have a final meeting with experienced Medical Care and Blue Cross executives in March, 1948.

As a result of a meeting with the Advisory Planning Committee of the California Medical Association, there has been put into effect a study of Bureaus of Medical Economics. This work is being carried out by the Bureau of Medical Economics of the Alameda County Medical Association, and a complete analysis of this bureau is being made, under the direction of Mr. Rollen Waterson, Executive Secretary of the Alameda County Medical Association.

A study is being made of the methods and results of the Professional Conduct, and the Fee Complaint and the Malpractice Committees of the Los Angeles Medical Association. This work is being carried out by Dr. L. Regan of Los Angeles, and Mr. Stanley Cochems, Executive Secretary of the Los Angeles Medical Association.

Information is being obtained from representative groups of doctors concerning attitudes of the medical profession toward certain phases of prepayment health insurance and Bureaus of Medical Economics.

None of the above studies can be completed until just before the Annual Meeting in April. A complete report with recommendations will be presented to the House of Delegates and the Council of the California Medical Association at the 1948 Annual Session.

Respectfully submitted,

H. GORDON MACLEAN, *Chairman*

REPORT OF THE POSTGRADUATE COMMITTEE

To the President and the House of Delegates:

In conformance with the resolution and action of the House of Delegates and Council of C.M.A., the committee on postgraduate activities has held two meetings in 1947.

By action of the Council of C.M.A., funds were allocated to organize and institute a program of postgraduate education for the benefit of the C.M.A. members.

In view of the fact that the geography of the state is peculiar in comparison with other states, the committee has investigated the application of postgraduate plans in operation elsewhere that might be applied to our membership. With the problem in mind the committee proposed that a full time or part time director be selected to carry on the postgraduate activities under the direction of the committee. This proposal was accepted by the Council of the C.M.A. and C. B. Andrews, M.D., selected on a half time basis at a salary of $500 per month as the director of postgraduate activities beginning January 1, 1948.

The committee has felt that the first duty of the director would be to survey postgraduate plans in operation in various other states. This survey will begin early in 1948 following which a curriculum will be established with outstanding medical educators participating as faculty.

In the interim of the establishment of the definitive program by the C.M.A. the committee proposes that a complete up to date list of available postgraduate courses at the medical schools and hospitals in California be published in California Medicine and further that the director maintain at the association offices complete information concerning such courses available to members of C.M.A.

Respectfully submitted,

John C. Ruddock, *Chairman*

COMMITTEE ON SCIENTIFIC WORK

To the President and the House of Delegates:

The Committee on Scientific Work has held several meetings during the year. As a result of the poll of Section Officers (described in last year's report), a majority have indicated their desire for more General or Joint Section Meetings without, however, abandoning a few special section meetings. The Committee has therefore planned some large group meetings for the 1948 Session, but, owing to the increasing size of the Association, has been compelled to utilize theaters in which to house these combined section meetings. It is anticipated that as many as 1,000 members will be attending some of them this year.

The problem of space for scientific exhibits is still poorly solved. The Committee hopes to have available a small amount of space this year, but not in an ideal location. Provision of space for scientific motion pictures will also be attempted. Perhaps the use of hospital auditoria in the town in which the meeting is to be held may be a partial solution to this latter question.

It has been customary for many years to have three invited guest speakers at each meeting, one chosen by the President, one by the Section on Medicine and one by the Section on Surgery. The Council voted this year to increase the number of official guests to five, three being chosen as above, and two by the officers of each of the other Scientific Sections in alphabetic rotation. Therefore, this year, the Sections on Anesthesiology and Dermatology will have an official guest speaker, with expenses defrayed by the Association.

Arrangements for holding meetings of other scientific societies during the Annual Meeting of the California Medical Association were considered at length by the Committee. After much correspondence and deliberation the following policy was adopted:

"The Annual Meeting of the California Medical Association is primarily for the benefit of the members of that Association. The meeting permits dissemination of scientific facts pertaining to new or important medical matters and research work, plus interchanges of opinions on better methods for the distribution of medical care and other organizational problems. It requires the support of *all* its members in order to develop the highest type of scientific program.

"Some California physicians are members of other special societies or organizations which desire from time to time to hold scientific meetings *during* the Annual Meetings of the State Medical Association. For this reason, the Committee on Scientific Work, after careful deliberation during the years 1946 and 1947, adopted the following policy:

1. Medical organizations wishing to hold meetings concurrent with the Annual Meeting of the California Medical Association are requested to plan such meetings so that they do not conflict with the scientific or other programs of the state medical organization. This will usually entail the special society holding its meeting *prior to or subsequent to* the three and one-half days required for the state meeting.

2. Medical organizations wishing to hold a short one or two hour organizational meeting *during* the C.M.A. meeting are welcome to do so, with due announcement in the Journal and program, provided no formal scientific session is planned which might conflict with the regular session.

3. Scientific papers prepared by C.M.A. members for presentation in connection with the Annual Meeting should be offered to the appropriate Section of the C.M.A., and thereby be available for publication in the State Journal."

That the work of the Committee has not been entirely in vain is evidenced from the editorial which appeared in the Bulletin of the Los Angeles County Medical Association for June 5, 1947. It is quoted herewith so that the members who worked so hard to make that meeting a success may read how others felt about their efforts:

"The seventy-sixth annual meeting of the California Medical Association last month at the Biltmore Hotel was one of the most successful in the history of organized medicine in this state. With a registration approaching three thousand, with a plethora of excellent scientific papers and exhibits, with a release from the tension of war and postwar conditions, the meeting had some of the old verve of the Del Monte days. . . .

"Those who missed the scientific papers and discussions will probably have the opportunity to read about the progress and achievements of medicine in this state in California Medicine or other scientific journals."

Respectfully submitted,

L. Henry Garland, *Chairman*

ANNUAL REPORT OF THE CANCER COMMISSION

To the President and House of Delegates of the California Medical Association:

The Cancer Commission has made slow but steady progress on the program outlined to you in 1946. As the Commission did not have a full-time paid Medical Director during this period, all of the responsibility has fallen on the members of the Commission. As of March first, Dr. F. R. Hook, a distinguished surgeon, will join the Commission as its Medical Director and will make possible a more energetic and comprehensive program.

During the past year the 1947 revision of "Cancer Commission Studies" has appeared in monthly chapters in California Medicine through the courtesy of the Editorial Board of that Journal. The revision is complete and the chapters will continue to appear monthly.

The Cancer Commission has endeavored to stimulate *periodic physical examinations of well persons in the older age*

groups amongst all the members of the California Medical Association. A record blank for these examinations was prepared and sent to every member of the California Medical Association. The Commission will furnish to all members upon request necessary blanks to fit the standard types of files in order to facilitate records of this examination.

During the year, through the cooperation of the California Department of Health and the Cancer Commission, cancer surveys have been conducted in San Diego, San Francisco, San Mateo, and Butte-Glenn Counties. It is the purpose of both the Department and the Commission to continue these surveys with participation of the county medical societies throughout the state as rapidly as the cooperation of those societies can be obtained.

The California Department of Public Health has made a grant to the Medical Association to finance the production of a sound motion picture film on "The Diagnosis of Cancer of the Breast." This film has gone into production and will be available in the near future to county medical societies and hospital staffs.

The Pre-Convention *Conferences* in *Radiology and Microscopic Tumor Pathology* are increasing in attendance and interest, from 100-200 physicians being present at the 1947 sessions. The mid-year conference in Microscopic Tumor Pathology held in December in Santa Barbara was attended by 75 physicians.

Universities both in San Francisco and Los Angeles have cooperated with the Cancer Commission in conducting *refresher courses on cancer* for physicians. The fall course was held at the Los Angeles County General Hospital in October. Spring refresher courses have been held under the direction of the University of California and Stanford University in San Francisco and the Tumor Board of the Los Angeles County General Hospital. These courses are subsidized by the California Division of the American Cancer Society and are without charge to the attending physicians.

The Commission has sponsored "Cancer Days" and Cancer Meetings for county medical societies. The Commission has provided full day programs on cancer or speakers for evening meetings wherever requested by the county medical society. This is a three-way program sponsored by the California Department of Health, the California Division of the American Cancer Society, and the Cancer Commission.

During the year the Bulletin of Cancer Control has been published in cooperation with the California Division of the American Cancer Society. The mailing list has now reached better than 3,500.

California Division, American Cancer Society. Three years ago, the Council of the California Medical Association authorized the members of the Cancer Commission to serve on the Board of Directors of the California Division of the American Cancer Society. The organization started in 1945 in a small two-room office with one secretary. Through a hectic adolescence due to lack of experienced lay personnel this organization has gradually developed into an effective business organization. Prominent lay leadership has been enlisted and are taking active interest in the program. Mr. Gurney Newlin of Los Angeles, the President, has had long executive experience in voluntary welfare work. Mrs. W. P. Fuller, Jr., State Commander, is an outstanding leader with rare tact and judgment. The ten lay members of the Board of Directors are well known throughout the state as business men and leaders in community welfare. In the administrative office, Mr. L. V. Griffith, one of the outstanding workers in California in community organization, is acting as Executive Vice-President. Mrs. Joseph A. Blaney, Program Director, has been National Deputy Commander of the American Cancer Society and comes to California with a wealth of experience on the national level. Dr. F. R. Hook who assumes the position of Medical and Scientific Director of the California Division is an experienced surgeon and organizer and is well known to many of the physicians in the state.

The 1948 campaign will be conducted in California on the basis of *hope*. The emphasis will be placed on the fact that approximately 10,000 cases of cancer are now being cured by the physicians in California, and that 10,000 more can be cured if they are detected early and receive prompt efficient treatment.

The California Division is cooperating with the California Medical Association in grants for the publication of "Cancer Commission Studies," in the subsidy of refresher courses, subsidy of cancer consultation boards, and in the subsidy of cancer conferences in non-metropolitan areas.

California Department of Public Health. The Cancer Commission is receiving wholehearted support and cooperation from Dr. Lester Breslow and Dr. James W. Ellis from the California Department of Public Health. Both organizations are cooperating in cancer surveys, cancer conferences in non-metropolitan areas, and in the educational film on "The Diagnosis of Cancer of the Breast." Both organizations are working together in stimulating the formation of Tumor Boards throughout the state. Very substantial grants have been made by the Department of Health to this work.

Again the Cancer Commission extends to the Council and to the House of Delegates thanks and appreciation for their confidence and support during the past year.

Respectfully submitted,

LYELL C. KINNEY, M.D.

ADVISORY PLANNING COMMITTEE

To the President and the House of Delegates:

The Advisory Planning Committee met regularly during 1947 and submitted reports to each meeting of the Council. The minutes of the committee's meetings are not printed but are found in the Council minutes. The committee has held one meeting with the standing Committee on Medical Economics and is cooperating with that committee in its study of physician-patient relationships as a basis for a long-range public relations program. The Advisory Planning Committee stands ready to cooperate similarly with any other standing or special committee, on instructions from the Council.

During the year the membership of the committee was increased by the appointment of Mr. Vance Venables, executive secretary of the Kern County Medical Society. This appointment was made, in accordance with House of Delegates instructions, by the C.M.A. Council.

Respectfully submitted,

JOHN HUNTON, *Chairman*

THE COMMITTEE ON ORGANIZATION AND MEMBERSHIP

To the President and the House of Delegates:

There are still over four thousand practicing physicians of the State of California who are not members of the state medical association, according to figures presented below. However, there has been a substantial increase in state association membership during the past year. The large influx of population into Los Angeles County has been reflected in the increase of the 1947 Los Angeles County membership over 1946. The total number of physicians practicing in Los Angeles has reached an all-time high of 5,869. Of these, 4,038 belong to the County Association. The same proportion of state association membership to the medical population seems to exist throughout the state. The physician population in percentage total to the lay population is high, higher than in most states of the Union. This high incidence of physicians in California was brought about by the large influx of medical men during and after World War II. The California Medical Association is the third largest state association in the U.S.A.

The appended resume has been prepared by the central office.

Respectfully submitted,

CARL L. MULFINGER, *Chairman*

C.M.A. County Society Membership Totals
For Calendar Year 1947

County Medical Societies	Membership in 1946	Number Licensed Physicians *(1946 Directory)	Membership in 1947	Number Licensed Physicians *(1947 Directory)
Alameda	659	884	673	1,062
Butte-Glenn	38	46	36	58
Contra Costa	65	115	79	138
Fresno	165	160	175	201
Humboldt	39	42	34	52
Imperial	23	26	25	28
Inyo-Mono	8	8	9	10
Kern	87	108	99	142
Kings	23	25	23	25
Lassen-Plumas-Modoc	13	7	13	23
Los Angeles	3,472	4,019	4,038	5,869
Marin	56	77	66	90
Mendocino-Lake	24	34	24	36
Merced	31	31	27	48
Monterey	68	90	75	116
Napa	39	57	45	68
Orange	147	179	172	228
Placer-Nevada-Sierra	30	58	33	53
Riverside	80	120	87	149
Sacramento	185	211	209	241
San Benito	6	9	7	9
San Bernardino	193	207	192	276
San Diego	391	499	400	630
San Francisco	1,292	1,572	1,239	2,009
San Joaquin	123	120	123	152
San Luis Obispo	25	33	35	41
San Mateo	111	132	135	178
Santa Barbara	125	130	127	167
Santa Clara	242	270	287	366
Santa Cruz	47	59	54	71
Shasta	15	17	17	22
Siskiyou	11	17	11	19
Solano	51	74	53	91
Sonoma	69	85	78	103
Stanislaus	57	57	45	70
Tehama	7	11	9	12
Tulare	49	72	60	75
Ventura	62	69	53	95
Yolo	27	22	26	24
Yuba-Sutter-Colusa	25	25	27	33
Total	8,180	9,777	8,920	13,080

* Note: The numbers of licensed physicians under the respective counties are those which appear in such listings of the 1946 and 1947 Directory of State Board of Medical Examiners.

CALIFORNIA PHYSICIANS' SERVICE

To the President and the House of Delegates:

This report on the activities of California Physicians' Service in 1947 is preliminary, and will be supplemented by the Annual Report at the meeting of the House of Delegates in April.

From the time of the last annual meeting of Administrative Members through December of 1947, the Board of Trustees has held seven regular meetings, two of which were two-day meetings. Because of the growth of C.P.S. and the consequent increase in complexity of operations, the board has found it necessary to meet monthly rather than bi-monthly. The Executive and Finance Committees of the board have met frequently, and held one joint meeting with the Executive Committee of the C.M.A. Council.

As of December 1, 1947, the total beneficiary membership of C.P.S. on a state-wide basis was 517,097. In line with efforts to put all phases of C.P.S. on a sounder business basis, enrollment activities have centered on building up percentages in existing groups. As a result, two-thirds of the enrollment during the past year represented additions to existing groups, and the remaining one-third represented new groups enrolled.

Further implementing this, the board put into effect stringent new underwriting rules intended to improve the selection of risk. New groups must have 75 per cent participation; payroll deduction is required of all new groups; existing groups of 13 or less have been put on a quarterly billing basis; an employee in an existing group who did not become a C.P.S. member when first eligible must complete a "Qualification for Membership Statement" which includes a comprehensive medical history; employers are now required to complete an application for a group contract. All of these new rules are designed to put C.P.S. underwriting on a sounder basis and to reduce administrative costs.

One of the most outstanding achievements during the year arose out of a meeting with the Board of Directors of H.S.S.C. In Southern California, C.P.S. and the Blue Cross Plan function jointly, and joint operations have presented various problems and difficulties in the past. As a result of the meetings of the two boards, a Joint Control Committee, with representation from both boards, was appointed to draft a joint operating agreement and establish policy for joint operations. The results have been most satisfactory, and I am sure I can speak for the members of both boards in stating that future operations should present no great difficulty.

Physician membership in C.P.S. as of December 31 totalled 8,652. Beneficiary members may secure services of physician members in all parts of the state, and no particular problems have arisen.

During the year the board established Special Reviewing Committees, consisting of physician members of the board representing the different geographical areas of the state, to handle any difficulties arising between physician and patient under the Veterans' Program as well as the Commercial Program. General Hawley has strongly commended the Board of Trustees for the establishment of these committees.

C.P.S. headquarters in San Francisco have moved to new and larger offices, which has done much to increase efficiency.

This report is merely a condensed summary. A full report of C.P.S. activities during the year will be given at the Annual Meeting of Administrative Members.

Respectfully submitted,

CHESTER L. COOLEY, *Secretary*
Board of Trustees

COMMITTEE ON ASSOCIATED SOCIETIES AND TECHNICAL GROUPS

Executive Group
Peter Blong, Chairman, 1949
Edward F. Nippert, 1948 Robert A. Scarborough, 1950

To the President and the House of Delegates:

This committee has met with a liaison committee from the California State Nurses' Association. As it has been very well pointed out by a former chairman, Dr. John V. Barrow, it would be of profit to both Associations to have a representative from the Nurses' Association on our own state program.

The matter of signed, standing orders for industrial nurses was referred to this committee. It was thought desirable, for the protection of all concerned, to have worked out, signed, standing orders for the industrial nurse. A directive could well come from the House of Delegates in regard to the same.

This committee strongly urges a program of economic medicine at our state meeting. An effort should be made to get our younger members back of such a movement.

A technical group would do well to take up the matter of health insurance, and such a group should be encouraged by some reward. Lay assistants of high technical caliber should be included more and more in our Association.

The United Public Health League is filling a well defined economic need. This committee would commend the President, Dr. Dwight Murray, for his tactful leadership in that rapidly expanding movement. In our present economic shuffle it can be said that medicine can no longer hide its light under one basket.

Respectfully submitted,

PETER BLONG, *Chairman*

REPORT OF EDITORIAL BOARD CALIFORNIA MEDICINE

To the President and the House of Delegates:

The members of the Editorial Board are:

Chairman of the Board:
Dwight L. Wilbur, San Francisco

Executive Committee:
Lambert B. Coblentz, San Francisco
Albert J. Scholl, Los Angeles
H. J. Templeton, Oakland
Dwight L. Wilbur, San Francisco

Anesthesiology:
William B. Neff, San Francisco
Charles McCusky, Los Angeles

Dermatology and Syphilology:
Paul Foster, Los Angeles
H. J. Templeton, Oakland

Eye, Ear, Nose and Throat:
Frederick C. Cordes, San Francisco
Lawrence K. Gundrum, Los Angeles
A. R. Robbins, Los Angeles
Lewis Morrison, San Francisco

General Medicine:
Mayo H. Soley, San Francisco
O. C. Railsbach, Woodland
Lambert B. Coblentz, San Francisco
John Martin Askey, Los Angeles
W. E. Macpherson, Los Angeles

General Surgery:
Frederick L. Reichert, San Francisco
C. J. Baumgartner, Beverly Hills

Orthopedic Surgery:
Frederic C. Bost, San Francisco
Hugh Jones, Los Angeles

Thoracic Surgery:
John C. Jones, Los Angeles
H. Brodie Stephens, San Francisco

Industrial Medicine and Surgery:
Rutherford T. Johnstone, Los Angeles
John E. Kirkpatrick, San Francisco

Plastic Surgery:
George W. Pierce, San Francisco
William S. Kiskadden, Los Angeles

Neuropsychiatry:
Karl N. Bowman, San Francisco
John B. Doyle, Los Angeles

Obstetrics and Gynecology:
Daniel G. Morton, San Francisco
Donald G. Tollefson, Los Angeles

Pediatrics:
E. Earl Moody, Los Angeles
William G. Deamer, San Francisco

Pathology and Bacteriology:
Alvin G. Foord, Pasadena
Alvin J. Cox, San Francisco

Radiology:
R. R. Newell, San Francisco
John W. Crossan, Los Angeles

Urology:
Albert J. Scholl, Los Angeles

Pharmacology:
Hamilton H. Anderson, San Francisco
Clinton H. Thienes, Los Angeles

Public Health:
George Uhl, Los Angeles
Charles E. Smith, San Francisco

The Executive Committee of the board met twice during the year to review operations of CALIFORNIA MEDICINE and consider proposals for developing sources of editorial material.

Members of the Editorial Board, called upon to review a greater number of manuscripts than in the preceding year, carried out this work with gratifying dispatch.

During the year, Dr. Hamilton Anderson, chairman of the Division of Pharmacology and Experimental Therapeutics of the University of California Medical School, accepted appointment to the Editorial Board to fill a vacancy caused by the resignation of Dr. Windsor C. Cutting.

No appointment has yet been made to fill the vacancy on the board caused by the death of Dr. Clark Johnson in January of this year.

Respectfully submitted,

DWIGHT L. WILBUR, *Chairman.*

COMMITTEE ON RURAL MEDICAL SERVICE

To the President and the House of Delegates:

This committee was activated through the initiative of Regional Director of the A.M.A. Committee, J. Frank Doughty, M.D., Tracy. With this able assistance and advice the first California Rural Health Conference was held in Sacramento, December 6, 1947. Representatives of the several major farm organizations, State and County Health Departments, State Dental Association, State Nurse Association, P.-T. A., Taxpayers League and other interested bodies participated. The response was gratifying and interest encouraging with hopes expressed for continued similar conferences.

Your chairman attended the National Rural Health Conference, Chicago, February 5 and 6, 1948.

Respectfully submitted,

CARROLL B. ANDREWS, *Chairman*

REPORT OF COMMITTEE ON LOCAL ARRANGEMENTS

To the President and the House of Delegates:

The Committee on Local Arrangements has been pleased to cooperate with the officers of the California Medical Association in making suitable arrangements for the 1948 Annual Session. The Association has not met in San Francisco for a number of years and the committee welcomes the 1948 meeting. We hope all those attending the session will be comfortable and will enjoy a fine session in keeping with the highest standards. The committee is prepared to give every possible service toward this end.

Respectfully submitted,

ROBERTSON WARD, *Chairman*

Roberto F. Escamilla, *Vice-Chairman*	Mr. Frank J. Kihm, *Secretary*
Dorothy W. Atkinson	Marius A. Francoz
Lois Brock	Salvatore P. Lucia
Francis L. Chamberlain	M. Laurence Montgomery
Lambert G. Coblentz	Sidney J. Shipman
G. Dan Delprat	Forrest M. Willett

PHYSICIANS' BENEVOLENCE COMMITTEE

To the President and the House of Delegates:

As in 1946, the principal benevolences disbursed by the Physicians' Benevolence Committee during 1947 were made to the Los Angeles County Physicians' Aid Association, which has been paid $500 each month. In addition, a total of $500 in contributions to three other needy physicians was made during the year, making a total disbursement by the fund of $6,500 for the calendar year 1947.

The committee had receipts of $10,793.52 during 1947, the major part of which came from the California Medical Association general funds under the By-Law provision which sets aside one dollar per active member for this fund each year. The Woman's Auxiliary to the C.M.A. contributed $2,663.52 in 1947, the largest contribution yet made by the Auxiliary and most certainly a generous move which deserves the sincere thanks of all Association members.

At the close of 1947, the Physicians' Benevolence Fund showed total assets of $21,457.57, held in savings and commercial accounts. This sum is due to be increased somewhat in early 1948 when the Association completes its contribu-

tion of one dollar per member; the C.M.A. regularly makes its major contribution to the fund in June or July, when Association membership is fairly well established, then completes the contribution following the end of the year, when the final membership is fully recorded.

The Committee has recently been investigating the possibilities of needy physicians or their families being cared for in the proposed home to be built by the Los Angeles County Physicians' Aid Association. This point has arisen because of the fact that the fund contributes $500 each month to the Los Angeles organization, a contribution undertaken two years ago on the assumption that needy physicians from all California counties would be provided for in this home, when it is built. This question is now being explored and it is hoped that a satisfactory working arrangement may be made with the Los Angeles group.

Respectfully submitted,

AXCEL E. ANDERSON, *Chairman*

ANNUAL COUNTY MEDICAL SOCIETY REPORTS

FIRST DISTRICT

Imperial, Orange, Riverside, San Bernardino, and San Diego Counties.

John D. Ball, Santa Ana, *Councilor.*

Orange County Medical Association

Our membership has continued to increase during the past year, as a result of which we now are entitled to four delegates instead of three. The meetings have been well attended and many excellent programs obtained. One problem we face is a place large enough to hold a meeting, especially a dinner meeting.

During the year we have obtained group accident and health insurance for our members. We have also spent a great deal of time and thought on arranging that proper malpractice insurance is also available.

LLEWELLYN E. WILSON, *Secretary*

Riverside County Medical Association

An annual out of town meeting of the Riverside County Medical Association was held at Palm Springs. Dr. John Cline was guest speaker at the 1947 meeting.

The second Monday of each month at 8:00 p.m. the Association meets at the Riverside Community Hospital. A scientific program is presented and is followed by a business session.

The Secretary of the Association publishes a monthly bulletin which is distributed the first week of each month.

CECIL J. LORD, *Secretary*

The San Bernardino County Medical Society

The membership of the San Bernardino County Medical Society is constantly growing, increasing from 188 members in 1946 to 203 at the present time, with other names soon to be added. The number of doctors has increased over and above the proportionate increase in the population, and this change holds true in both city and rural areas.

Efficient handling of the executive duties of the society has been made easier with the hiring of Mrs. Judy Fox as full-time assistant to the Secretary, Dr. Carl M. Hadley. Mrs. Fox is managing editor of the San Bernardino County Medical Bulletin which has been doubled in size with a corresponding increase in advertising revenue, which in turn makes possible a more attractive and interesting Bulletin under the editorship of Dr. Hadley.

An active interest in the society is being maintained under the leadership of the new president, Dr. Meredith G. Beaver. This interest is reflected in the excellent attendance at all meetings which is due in a large way to the very fine programs which have been arranged by the Program Committee under the chairmanship of Dr. J. C. Carmack.

Another active committee is the Cancer Committee, with Dr. James R. Savage as chairman. The work and scope of this committee has been increased with the establishment of a local branch of the American Cancer Society, and a strong educational and clinical program is under way.

CARL M. HADLEY, *Secretary*

San Diego County Medical Society

The San Diego County Medical Society closed 1947 with a membership of 401 and 80 applicants on the waiting list. During the year 44 new members were admitted and several have retired from active practice. The growth of the Society has more than justified its action last year in securing the services of an Executive Secretary. Mr. K. C. Young has been more than busy since he assumed that position. He has lightened the Secretary's load tremendously. The past year has seen the establishment of the Society headquarters on the ground floor of the Medico-Dental Building together with that of the Doctors Service Bureau. The new office space is also shared with the local chapter of the Cancer Society, which arrangement affords opportunity for closer liaison with that organization.

Public relations on a larger scale have been carried out in 1947 than in any year in our history. A scientific exhibit was prepared for the annual "show" of the local Council of Technical Societies which the Society has joined. It proved to be of quite some interest to the public. An astounding amount of effort was put forth under the leadership of Dr. T. F. O'Connell in the establishing of a Blood Bank in cooperation with the Naval Hospital, the Red Cross, the various hospitals, and the city and county authorities. It is well on its way to afford blood and the various blood preparations for the city and county. Under the direct handling of our Executive Secretary several series of radio broadcasts have been presented over local radio stations. Many other activities have been directed by Mr. Young through the newspapers and other media of contact with the public.

Under the sponsorship of the Society and the Health Department a Maternal and Neonatal Welfare Committee has been established with the purpose of studying the problems of maternal and neonatal welfare, having in view the lowering of the morbidity and mortality rates among mothers and newborn. A survey has been conducted by the Cancer Commission and steps are being taken to present refresher courses in cancer detection and treatment, a diagnostic clinic having been established at Mercy Hospital. Cancer prevention work was given additional momentum through the preparation of a panel of members of the Society who would handle carcinoma cases in cooperation with the local chapter of the Cancer Society and the Cancer Commission.

Plans were laid in 1947 for the further education or refreshening of the members of the Society. Postgraduate lectures have been given at the County Hospital and additional training in the basic sciences for the intern staff is being prepared. A general refresher course under the direction of Dr. Griffith and the University of Southern California has been started and will be continued indefinitely into the future.

Plans for additional hospital beds have progressed slowly but surely. The high cost of materials continues to be an effective stumbling block, but hopes are still held for a bettering of the general situation. Practically all, if not all of the hospitals in the city and county now have organized staffs with staff regular meetings and scientific programs and discussions, regardless of the size of the institutions. This is a tribute to the interests of both hospital authorities and staff members in the advancement of the care of the patients. A 200 bed Veterans' Hospital is still in the talking stage though 1948 may see the definite allocation of such an institution to this area and the beginning of actual construction.

C.P.S. continues to function both with regard to non-veteran and veteran needs. The local medical staff of the Veterans Administration with its outpatient facilities handles the bulk of the ex-service patients, but a fair amount of service is rendered by the civilian members of the profession with apparent satisfaction to all concerned.

We are looking forward to 1948 with high hopes of continued progress and a careful eye to the economic and legislative problems that are sure to arise.

W. H. GEISTWEIT, JR., *Secretary*

SECOND DISTRICT

Los Angeles County.

Jay J. Crane, Los Angeles, *Councilor.*

Los Angeles County Medical Association

The Los Angeles County Medical Association had the usual busy year in 1947. A large influx of new membership, predicated principally on the increase in medical population of the county, was the source of an all-time high in total membership.

An indoctrination program for new members was continued. Many of the newer members and the returned

veterans are taking an active part in the Association affairs. The medical veterans group has been socially active and its get-togethers have been the source of renewed acquaintances for many of the returned service men.

Part of the Association's activities are now ensconced in a refurbished building on Westlake Avenue, north of the main building. In this building are the headquarters of the County Division of the American Cancer Society and the offices of the publications of the Association. This removal of part of the office force from 1925 Wilshire Boulevard to Westlake Avenue again makes available the dining room for section meetings.

Financially, the Association is in a satisfactory condition. Quarterly statements were sent out to the members giving a detailed account of expenditures and assets. The Library continues to grow in importance as a repository for printed medical knowledge, and as an available place for those engaged in research projects to carry on necessary work in medical literature.

Due to the size of membership and numerous activities, the Board of Trustees and the Council had an unusually heavy agenda at their meetings. This work was in most instances dispatched with proper eclat, but the unfortunate incident of the matter of professional rebates marred an otherwise constructive year. Because of hesitant action on the part of the Council and officers during the year 1947, a lay organization seized the opportunity to report to the press of the nation of activities that were detrimental to the good name of the profession of this community. This oversight on the part of the Council was rectified in the first meeting of 1948 by having that body adopt a set of rules and regulations that make rebating inconsonant with membership in the Association.

The Physicians' Aid Association, the Woman's Auxiliary, the new Research Foundation, and the numerous scientific and geographical sections all made outstanding progress during the year 1947.

C. L. MULFINGER, *Secretary*

THIRD DISTRICT

Inyo-Mono, Kern, San Luis Obispo, Santa Barbara, and Ventura Counties.

Harry E. Henderson, Santa Barbara, *Councilor.*

Inyo-Mono County Medical Society

The Inyo-Mono County Medical Society has had a quiet year during 1947. We have had our monthly meetings in Bishop and Lone Pine alternately, thus somewhat equalizing the travel difficulties, as the Northern and Southern limits of our members' residences are over 200 miles.

Two new physicians have moved into our area. We will welcome them into our membership when their required six months' residence has passed, as they are both ethical young men.

L. S. BAMBAUER, *Secretary.*

Kern County Medical Society

The Kern County Medical Society has wound up the year 1947 in a state of activity which characterized the progress of the entire year. The last month of the year witnessed the culmination of many projects begun at various times throughout the year and registered definite success in the solution of the long-standing Kern County hospital problem.

Of immediate concern and benefit to the individual members of the Society were such activities as the securing of a group malpractice insurance plan, a group health and accident insurance policy, the sponsoring of a symposium on cancer under the auspices of the American Cancer Society, and the extension of University of Southern California School of Medicine to doctors of the community.

During the year, a full-time Office of Executive Secretary was established, and the Medical Economics Council was organized. A rheumatic fever clinic was established and funds for its operation assured through the Kern County Shrine Club. A positive program of public relations through the office of Executive Secretary and the practice of good medical economics was inaugurated.

As a positive step toward the solution of the Kern General Hospital dispute, which has been a blight on the progress of medicine in Kern County for many years, an ordinance providing for a seven-man commission to govern the hospital was enacted.

Those in office during this year of unusual activity were James T. Stanton, President, and Frederick O. Wynia, Secretary-Treasurer. Elected to provide leadership for the year 1948, which will be an equally active and fruitful year, were Frederick O. Wynia, President, and John J. Cawley, Secretary-Treasurer; and to the Board of Directors, James T. Stanton and Robert E. Scherb.

Through the office of the Medical Economics Council, new services in auditing, accounting, billing, collecting, and office management will be provided for doctors, said services being of a specialized nature and devised particularly to bring about better economic relations between the doctors and their patients.

FREDERICK O. WYNIA, *Secretary*

Santa Barbara County Medical Society

The Santa Barbara County Medical Society now comprises about 140 members. A fair number of applications for membership are pending.

During the year 1947 the Society took measures to protect its individual members, both from the standpoint of health and accident, and malpractice insurance. The malpractice protection which we now have entailed the formation of a medical defense committee. According to statistics, where this mechanism prevails there has been a decided improvement in patient-doctor relationship.

The Santa Barbara County Medical Society has also fostered the formation of the Citizens' Advisory Council of Santa Barbara, an organization which is comprised of members of many civic, social welfare, and business groups in Santa Barbara, for the purpose of improving health and hospital care in this community.

During the year the members living in and around Santa Barbara assessed themselves $25 each, for continuation and maintenance of the medical library.

We consider ourselves very fortunate in having procured a number of well known and interesting speakers during the year:

January: During the annual banquet meeting Dr. Robert R. Newell from Stanford University, Department of Radiology, entertained us with his experiences at "Operations Cross Roads at Bikini Atoll."

February: Dr. Karl M. Bowman, Superintendent and Medical Director of the Langley Porter Clinic of the University of California, San Francisco, spoke on "Some Concepts of Psychosomatic Medicine."

March: Dr. Garnett Cheney, clinical Professor of Medicine at Stanford University, spoke on "Leptospiral Infections in Man and Dog."

April: A group of doctors, including Dr. Walter Anderson, Dr. Reginald Smart, Dr. William H. Carnes, and Dr. Tony Lanza, presented a panel discussion on pneumoconiosis caused by Crystoballite in the Diatomaceous earth industry.

May: Dr. Frederic Shidler, Department of Surgery of the Stanford Medical School, spoke on "Carcinoma of the Rectum and the Large Bowel."

June: The hospitality of the Santa Marie doctors was again extended to the Society members. Phil Reagan, M.D., and counselor, presented a resume of the present status of malpractice.

September: Dr. Jurgen Ruesch, of the University of California Medical School, spoke on the subject of "Personality in Chronic Illness."

October: Dr. Emil Holman, Professor of Surgery at Stanford University, presented his paper on "Problems of Gastric Cancer."

Also in October a special meeting was held to enable the members of the Society to hear Dr. H. Winnette Orr, Orthopedic Surgeon from Lincoln, Nebraska, internationally known for the treatment of osteomyelitis, known as "The Orr Method."

November: Dr. Thomas Addis, Professor of Medicine, Stanford University, spoke on "Acute Gomerulonephritis."

December: Dr. Harry Goldblatt, Director of Research at Cedars of Lebanon Hospital, spoke on "The Renal Origin of Hypertension."

At the December meeting new officers elected were: President, Charles A. Preuss, M.D.; President-Elect, Rodney F. Atsatt, M.D.; Vice-Presidents at large, Horace Coshow, M.D., and Albert M. Beekler, M.D.; Secretary-Treasurer, Douglas F. McDowell, M.D.; Delegates, Alfred B. Wilcox, M.D., Harry C. DeVighne, M.D., and Douglas F. McDowell, M.D.; Alternates, D. H. McNamara, M.D., H. V. Findlay, M.D., and Hugh Friedell, M.D.; Council, Clifford Jones, M.D., Lawrence Heiges, M.D., J. Gary Campbell, M.D., Harold Schwalenberg, M.D., and Charles A. Preuss, M.D.

DOUGLAS F. MCDOWELL, *Secretary*

Ventura County Medical Society

The Ventura County Medical Society had 57 active and four retired members at the close of the year. There are ten applications for membership on file.

Meetings are held on the second Tuesday of each month at the Colonial House in Oxnard. The meetings are preceded by a dinner. Twelve meetings were held during the past year. They are divided into two parts, the first part

is devoted to a scientific paper and discussion with the second part given over to the discussion of the economic and organizational phases of medical practices.

Although there has been no improvement in the hospital bed and nursing situations during the past year, we have hope for improvement this year as both of the private hospitals have funds for building additions.

Funds for a Cancer Detection Center have been made available and it will start to function as soon as the necessary equipment arrives. We are also conducting a survey to determine the causes of our high infant mortality rate in this county. We are continuing to stress public relations and to cooperate with the allied professions.

A. A. Morrison, *Secretary*

FOURTH DISTRICT

Calaveras, Fresno, Kings, Madera, Mariposa, Merced, San Joaquin, Stanislaus, Tulare, and Tuolumne Counties.

Axcel E. Anderson, Fresno, *Councilor.*

Fresno County Medical Society

During the year 1947 the Fresno County Medical Society held nine meetings.

Scientific subjects were featured at all meetings and out of town guest speakers from the various medical centers in California were made available for our use.

During the past year the County Society has availed themselves of a group health and accident insurance policy which has been successful to date.

The Society is contemplating obtaining the services of an executive secretary and is beginning to place emphasis on attempting to procure more reasonable malpractice insurance rates.

Many new physicians have come into the Fresno area during the year and office space is still at a premium.

W. N. Knudsen, *Secretary*

Kings County Medical Society

During the past year monthly meetings have been held in the Kings County Medical Society. Although our membership is small we have a very loyal group.

William F. Chamlee, *Secretary*

Merced-Mariposa Counties Medical Society

Dinners before meetings have been dispensed with since last year, because the business sessions seem to be more successfully conducted when the social amenities are absent.

The Society continues to staff the County Hospital and cordial relations are maintained with the manager and the County Supervisors. The funds that are eventually collected from cases at the County Hospital for medical attention go into the Society Treasury and makes it possible for us to get along without any dues assessments and leaves enough more to give a nice party or picnic when desired.

The postwar membership muddle is now cleared and there are 26 members and three applications for membership are pending. This is an increase over last year of four members.

James A. Parker, *Secretary*

San Joaquin County Medical Society

The year 1947 has been a red letter year for the San Joaquin County Medical Society under the leadership of Dr. J. O. Eccleston, president. The Society can be justifiably proud of the many accomplishments.

The membership has shown a net increase of 12 physicians. Nine excellent scientific programs have been presented with good attendance by the members of the Society. Among the more important projects undertaken by the Society should be mentioned the following:

1. Under the leadership of Dr. Donald Harrington the Society has sponsored the organization of a blood bank. This project is rapidly approaching a successful initiation and the bank is expected to open early in 1948.

2. Dr. C. A. Broaddus for the tenth year served as Chairman of the Postgraduate Study Club and brought a series of prominent lecturers to the area.

3. The Society sponsored a "Voluntary Health Insurance Week" at the request of the public relation experts of the C.M.A.

4. Active professional guidance has been provided by the Society to the organization of a Cancer Society.

5. The Society cooperated with the Health Department and the Tuberculosis Society in the organization of a Consultative Rheumatic Fever Clinic.

The following Scientific papers have been presented:

January 9, 1947—"Blood Banks," Dr. Joseph More.

February 6, 1947—"Recent Advances in Cardiology," Dr. Francis Chamberlain.

March 6, 1947—"The Program of the C.M.A.," Mr. John Hunton.

April 3, 1947—"The Newer Antiobiotics," Dr. Henry Grainerd.

May 8, 1947—"Tuberculosis Case Finding by this Private Physician," Dr. Sidney Shipman.

June 5, 1947—No Scientific Papers.

September 4, 1947—"Problems of Malpractice," Mr. Dudley Shepherd.

October 2, 1947—"Acute Cholecystitis," Dr. Leon Goldman.

November 6, 1947—"Anxiety States," Dr. Wm. Titley.

December 4, 1947—"The Rh Factors," Dr. Robert Evans.

H. D. Chope, *Secretary*

Stanislaus County Medical Society

Regular scientific and business meetings were held by the Stanislaus County Medical Society during the year 1947.

A special activity of the Society for the year has been the organization of a Tumor Board to work on the problem of Cancer in cooperation with the Cancer Commission of the California Medical Association.

J. Lyle Spelmann, *Secretary*

Tulare County Medical Society

Regular monthly meetings of the Tulare County Medical Society were held throughout 1947 with Dr. F. R. Guido presiding. Death claimed two of the most prominent and active members of the Tulare County Medical Society, Dr. W. A. Preston and Dr. I. H. Betts, both residents of Visalia.

During the year the total active membership of the Society has shown a marked upward trend with new names being added to the roster almost every month. Many distinguished speakers from all parts of the state were heard during the scientific programs of the year.

The Society resumed a pleasant pre-war custom this year by holding a social evening of dinner dancing attended by members of the Society and their wives.

At the year's end, plans are under way for the adoption of a health and accident insurance program and a group malpractice program.

Officers elected to serve for the coming year are: Dr. W. A. Winn, Springville, President; Dr. Wiley Zinc, Tulare, Vice-President, and Dr. Debora Pineles, Visalia, Secretary-Treasurer.

Debora Pineles, *Secretary*

FIFTH DISTRICT

Monterey, San Benito, San Mateo, Santa Clara, and Santa Cruz Counties.

R. Stanley Kneeshaw, San Jose, *Councilor.*

Monterey County Medical Society

The Monterey County Medical Society concluded a successful year with the 1948 election of Drs. J. B. McCarthy, president; F. H. Smith, vice-president; W. F. Coughlin, secretary, and A. L. Wessels and H. Clark as delegates.

Thirteen new members were admitted to the Society. Five members were dropped and two were transferred. The deaths of Ralph Pray of Salinas and Ralph Workman of Pacific Grove leave vacancies that time and doctors will be unable to fill.

The previously high standards of the scientific programs were maintained in the Society's good fortune as having as guest speakers: Dr. L. D. Howard, "Surgery of the Hand"; Dr. Loren Chandler, "Malformations of the Intestinal Tract"; Dr. Carleton Mathewson, "Carcinoma of the Colon"; Dr. Norman Freeman, "Peripheral Blood Flow"; Dr. Phillips Tygeson, "Ocular Manifestations of Systemic Disease"; and Dr. Max Waters, "Bone Tumors."

An increasing interest in Medico-Economic affairs resulted in additional well-attended meetings on the subject of California Physicians' Service and the State Survey of Hospital Facilities with Drs. Sidney Shipman, Lynn Cooley, and Milton Halverson as speakers. A highlight of the year was the address of Dr. John Ellis of the Monterey County Hospital on the Medical aspect of the occupation of Austria. Spirited discussions in an atmosphere of unqualified friendliness have marked the year 1947 as a banner one in the history of our Society. Respectfully,

F. Hilton Smith, *Secretary*

San Benito County Medical Society

The San Benito County Medical Society has six active members and due to the small membership has been inactive during the last few years. A reorganization meeting was held January 21, 1948, with the election of Eberle C. Sheldon, president, and Roswell L. Hull, secretary, for the current year. Meetings are to be held monthly, on the first Wednesday of each month.

JOHN J. HARUFF, *Secretary*

San Mateo County Medical Society

Our Society has grown to 163 active members. The Hospital District has been formed in the southern part of the county (Sequoia Hospital District) and has already been voted the necessary money and bonds to proceed with construction. Another district has been formed for the northern and central part of the county (Peninsula Hospital District). If the plans go through as anticipated we hope to break the "bottle neck" of our bed shortage.

The postwar period has begun to smooth out and we are getting more acquainted with the new men that have come into our Society.

ALBERT G. MILLER, *Secretary*

Santa Clara County Medical Society

In May of 1947, the Santa Clara County Medical Society began its second year of operating a full-time business office and a full-fledged public relations program. The efforts of the Society's officers have been vigorous in developing a long-term program, well balanced, first in its values to the public's health and economic welfare, and second in its values to the Society's own members. The benefits of such activities are already proving their worth.

As the second year of the program began, the business office was moved to greatly expanded quarters on the 11th floor of the San Jose Medico-Dental Building. These facilities now house the Society's library, the Bureau of Medical Economics and the Society office. Employed personnel numbers six. During the year, an active part was taken in some phase of the Society's work by more than 84 different members.

The work of our Santa Clara County Bureau of Medical Economics—which was fundamentally created to do a job of public relations for medicine—has been very successful; first, in doing that public relations job with a vast majority of the 8,000 patients' accounts turned over to it, and second, in collecting over $40,000 cash. The statement "stickers" as developed by our Bureau office and also used by the San Francisco and Oakland branches of the Bureau, have been conservatively estimated as recovering a minimum of $500 per doctor per year—or a gross of $90,000 per year for those members who are actively using the Bureau. This figure is six times greater than the total Society membership dues paid for the first year to get our present program started. Without the aid of outside personnel, the Bureau, for local doctors, recovered funds from 67 cities in 19 states and 3 foreign countries.

We have two special committees that are just starting out on some very important projects. One is our committee on "Central Emergency Hospitals" and another the "Medical Society Building Committee."

Membership in our Group Health and Accident Insurance and in the Society's Blue Cross Plan has substantially increased. Cash payments totaling $4,093 have been paid to the Society members on the Sickness and Accident Insurance.

Fifty-one members have assisted at drawing 2,011 pints of blood at 83 Blood Bank sessions this year. Dr. Threlfall has been responsible for this committee and has done a splendid job—despite the many complications which have plagued the committee during this initial year.

The Society's expressed guarantee to see that *no one* in this county need be without medical care because of any inability to pay for it has been called upon at least 25 times during the past year and doctors who were asked to help out have been extremely cooperative. This Society policy has been made known to all local social and civic agencies. The small number of demands made upon the Society, is in a fair degree, a significant measure of *how few* people there are that are going without proper medical care in this county.

The Society now has its own radio program every Tuesday evening over Radio Station KEEN. Each broadcast highlights some aspect of the advances made by modern medicine in providing greater care and sickness prevention for more people. This Society is deeply appreciative of the splendid aid given it by the Los Angeles County Society in turning over the original scripts for their program "If They Had Lived Today." Scripts are enacted locally by San Jose State College drama students.

The Society was instrumental in working with the San Jose Chamber of Commerce in developing an entire section devoted to health exhibits at the County Fair. This year's efforts were only a forerunner, incidentally, of what is planned and may be possible for next year. In the Society's booth over 5,000 pieces of literature regarding Voluntary Health Insurance were distributed.

A comprehensive local advertising campaign on the subject of Voluntary Health Insurance enrollment has already been prepared and will make its appearance after the first of the year if funds are made available for it.

This year the Society business office staff talked with 84 doctors who wanted to open practice in this county. (That's one new man every fourth day.) Fifty-nine entered their application for membership—47 have already been elected, 12 are still pending. Our total membership now stands at 287.

At the December membership meeting high praise was voiced for outgoing President J. B. Josephson, for his splendid year of leadership.

LESLIE B. MAGOON, *Secretary*

Santa Cruz County Medical Society

Under the able leadership of Doctor Luther Newhall of Santa Cruz this Society enjoyed a very successful year. Six regular meetings were held at bimonthly intervals. All meetings were dinner meetings. In January Dr. Jesse L. Carr of San Francisco presented an interesting and timely paper on Interpretation and Misinterpretation of Certain Laboratory Tests. In February a special meeting was called for the purpose of discussing health insurance. Guest speakers included Mr. Ben Read, Dr. Sidney Shipman, Councilor Stanley Kneeshaw, State Senator H. Ray Judah and our Assemblyman, Donald Grunsky. The so-called Warren Health Bill was the main subject for discussion. In March we were addressed by Dr. Samuel H. Hurwitz of San Francisco on the subject Allergy in General Practice. The May meeting included an address by Dr. Frederick Rodenbaugh of San Francisco on the Bikini bomb tests and included official navy motion pictures. Dr. Stanley Johnson of San Francisco was with us in July and presented a paper on Surgical Conditions of the Stomach and Duodenum. A very interesting presentation of the subject Dermatology in General Practice was made by Dr. Rees Rees of San Francisco in September. The November meeting was given over to Dr. Robert Wartenberg of San Francisco who spoke on the subject of Neurology. The annual business meeting was also held in November and officers were elected for 1948.

SAMUEL B. RANDALL, *Secretary*

SIXTH DISTRICT

San Francisco County.

Edwin L. Bruck, San Francisco, *Councilor.*

San Francisco County Medical Society

The most important event for the San Francisco County Medical Society last year was the resignation of more than 900 doctors, representing 92 per cent of the panel of the San Francisco Health Service System, after a 10-years' trial of the only compulsory system of health insurance for municipal employees in the United States.

The Health Service System proved conclusively that socialized medicine is bad medicine for the public and the profession. Bureaucrats interfered with doctors and their patients, dictating to physicians how they should treat their patients and attempting to force them to practice second-class medicine upon city employees. Laymen dominated the management. The H.S.S. was an accurate forecast of all the evils with which medicine is threatened nationally, and which actually happened here in San Francisco!

The preoccupation of San Francisco doctors during the war caused them to overlook the iniquities of the System, but in May 1947 a letter written by the medical director of H.S.S. forced the doctors to act. Because H.S.S. was again in financial difficulties, the doctors were advised to lower the quality of medical care for the 17,000 city employees, by limiting laboratory tests, by curtailing x-ray examinations and disregarding normal diagnostic procedures.

In spite of the fact that the System's rates to its employed members had been increased by 21 per cent and the unit value paid to doctors dropped by 20 per cent, the

letter confessed that H.S.S. was actuarially unsound and could not keep its commitments and that the medical profession would have to deny employees the high standard of care provided their private patients.

The doctors of San Francisco refused to gamble with the health of their patients and demanded that the H.S.S. accept the following policies:

1. Make provision for members to obtain medical care from their own physicians.

2. Permit members to join a voluntary health insurance system with indemnity cash payments.

3. Permit the enrollment of H.S.S. members as members of a voluntary medical and hospital service plan which would provide them with health care in time of illness.

The H.S.S. Board rejected these proposals and this Society then filed resignations of 902 professional staff members of the System.

Subsequent meetings between the Society and the H.S.S. Board failed to bring about a settlement.

On January 2 it was made known that the H.S.S. Board refused to arbitrate unless resigned doctors return to the panel and, although this Society agreed to recommend to all doctors in San Francisco that they adhere to the H.S.S. fee schedule which was in effect prior to their resignation for the full two months duration of arbitration, the H.S.S. Board rejected the Society's proposal.

The H.S.S. laboratory experiment in socialized medicine has confirmed that when compulsion is employed to bring doctor and patient together, the quality of medicine deteriorates and patient and doctor alike become pawns in the hands of bureaucrats.

In 1947 membership in the San Francisco County Medical Society was the highest reached in any year of the Society's existence. A grand total of 1,375 members was listed as of December 1, 1947 and substantial numbers of applications are reaching headquarters each month from excellent young doctors from all over the country who have decided to practice medicine in San Francisco.

Last spring and summer the Society waged a vigorous drive against a very inequitable tax to be levelled against the professions. Here again the medical profession's unity of purpose was clearly demonstrated, and the Society spearheaded a campaign in which all professional groups from architects to veterinarians took part. The proposed tax was tabled by the Finance Committee of the Board of Supervisors, thus saving the doctors of San Francisco an estimated $60,000 a year.

A highly successful series of orientation lectures given applicants for membership in the Society started this year. They proved to be of great value in teaching younger doctors the ethics and principles of organized medicine.

The Bureau of Medical Economics operated all last year and showed consistent progress throughout. A report prepared by independent certified public accountants showed that the Bureau paid doctor-members nearly $20,000 during the first 10 months of operation.

That sum represented many old accounts that had been returned by commercial collection agencies as uncollectable, as well as many delinquent accounts that the doctors had failed to collect.

Voluntary Health Insurance Week was held in San Francisco in May 1947, heralded by a proclamation of the Mayor. The week was sponsored jointly by the California Committee for Voluntary Health Insurance and the San Francisco County Medical Society.

Newspapers accorded excellent publicity support to the project and a comprehensive program of newspaper and radio advertising was scheduled and paid for by the Committee.

Two outstanding entertainment events were initiated by the Entertainment Committee: Old-Timers Night, held Tuesday evening, April 2, and a Cocktail Party, held Friday, November 14.

During the year studies were undertaken with a view to either disposing of the library or improving it so that its usefulness might be enhanced. At the October meeting, the Board approved presentation of the library as a gift to the Stanford Lane Hospital and the University of California in San Francisco and Los Angeles. Representatives of the two universities are currently engaged in cataloguing the library for its division and disposition.

The Society's telephone referral service continued to grow, averaging some 3,000 calls a month. Inquiring patients were given adequate information in a complete and courteous manner. In addition, by referring the public to ethical, competent, reliable physicians, the Society rendered a definite service to the public by protecting their welfare.

Newspapers and radio stations were assisted in obtaining accurate information on scientific subjects. Approximately 25 inquiries were received from newspaper men and every effort was made to furnish them with the facts they requested. All inquiries by newspapermen can be referred to the Society headquarters, thus saving time and possible embarrassment.

The Society continued to give every support to the Woman's Auxiliary and that organization has been of invaluable assistance in many ways.

Further improvements were made in the format and content of *The Bulletin*. The size was increased and editorial matters accordingly expanded. Readability was enhanced by the use of cartoons and illustrations. Every effort was made to make *The Bulletin* truly representative of the membership and read by every doctor who belongs to the Society.

Arrangements for the establishment of minifilm chest x-ray facilities at the Society's headquarters in 1948 have been made with the Tuberculosis Association. Under the plan referral slips will be made available to all members of the Society which would entitle patients to free chest x-rays.

An amount of $13,737 was disbursed by the Special Service Fund Committee to 28 doctors who had seen active service in World War II.

ROBERTSON WARD, *Secretary*

SEVENTH DISTRICT

Alameda and Contra Costa Counties.
Donald D. Lum, *Councilor.*

Alameda County Medical Association

The Alameda County Medical Association is now meeting its full responsibility to medicine and the public. It has achieved most of the objectives outlined by its executive secretary and approved by the members of the Association in 1945.

Through its Bureau of Medical Economics, the Association has removed the commercial bill collector from the economics of medicine, has improved the physician-patient economic relationship, and has published and delivered its guarantee of a universal distribution of medical care to all of the people of Alameda County. Advertisements appear regularly in the daily press, explaining the economics of medicine, and offering proof of the Association's contention that there is no need for a change in the economic relations of physicians and patients. Radio programs and the other lesser forms of publicity will follow. Voluntary health insurance is being actively promoted.

Militant ethics and fee complaint committees guard the public interest and prevent the embarrassment of the ethical profession as a whole by the minority who are too short-sighted to place the good name of their profession ahead of immediate personal gain. Financed in part by the California Medical Association, the Bureau of Medical Economics is analyzing thousands of cases of broken and unsatisfactory physician-patient economic relations to determine and remove the causes of public dissatisfaction with the economics of medicine, which is still an individual matter between physician and patient and must be so treated if it is to be preserved. This is organized medicine's first scientific approach to "consumer relations" research.

The Association has assumed aggressive leadership in the promotion of a public health district and more hospital beds.

The Blood Bank of the Alameda County Medical Association is the first in California to evolve a system whereby blood is immediately available to every patient without question as to payment or replacement prior to transfusion. The bank is financially solvent and always has on hand the type and amount of blood needed for every case.

The Bulletin of the Association was rated by Dr. Vincent Williams, dean of County Medical Society editors, as one of the four best in the nation.

The American Mutual malpractice program, conceived and proved in Alameda County, has saved members nearly $100,000 in premiums. But, more important, its prevention program, tied in with the Association's public relations work, has *thus far* been 100 per cent successful in that there have been no suits or claims.

The Association and its various agencies now have 32 full-time employees. Its business ventures are by far the least important of its activities, yet far more than a quarter of a million dollars is the measure of its gross business. We are approaching a point where the writing of a book will be required for the secretary of this Association to answer a request for a report of its activities. And, perhaps, a book it shall be, with the title: "A Successful and Effective County Medical Society Program."

DOROTHY M. ALLEN, *Secretary*

EIGHTH DISTRICT

Alpine, Amador, Butte, Colusa, Eldorado, Glenn, Lassen, Modoc, Nevada, Placer, Plumas, Sacramento, Shasta, Sierra, Sutter, Tehama, Yolo, and Yuba Counties.

Frank A. MacDonald, *Councilor.*

Butte-Glenn Medical Society

As the name indicates, the Butte-Glenn Medical Society covers two counties and the distances vary from 20 to 30 and 40 miles for the members to travel and attend meetings. Nevertheless, out of approximately eight meetings, the attendance has varied around 30 and at times has been 35. We have met in Oroville, Gridley and Chico.

It is our custom to have a dinner meeting attended by the wives, who are members of the Women's Auxiliary and their membership is almost 100 per cent. Following our dinner, the ladies adjourn and hold their own meeting and have a social visit.

We have been very fortunate in having been able to secure excellent speakers from San Francisco, Oakland, Sacramento and Los Angeles.

Our Society has taken an active interest in tuberculosis, heart and cancer and have active committees working with these organizations. So we feel our Society is functioning 100 per cent and that its work is progressive and that we are a stabilized unit that commands the respect of our communities.

J. O. CHIAPELLA, *Secretary*

Yuba-Sutter-Colusa Counties Medical Society

The Yuba-Sutter-Colusa County Medical Society ("The Biggest Little Society in the State of California") has just concluded a year of unpredictable events. Besides holding nine regular meetings—it has held special meetings too numerous to mention—also members have frequently reported attending outside County Medical Meetings. We have also invited the membership of neighboring societies to attend our meetings and have been gratified on the fine showing. We have frequently had news reports in the local press regarding these meetings.

Dr. Francis P. Wisner served as program chairman during 1947 and he had the privilege of presenting such outstanding guest speakers as:

1. Frederick N. Scatena, M.D., of Sacramento, Secretary-Treasurer of the Board of Medical Examiners. Dr. Scatena presented a paper on Diabetes and discussed function of Board.
2. Norman Freeman, M.D., Associate Professor of Surgery, University of California, discussed Peripheral Vascular diseases.
3. Dr. James Shumate discussed nailing hip fractures.
4. Dr. Larsen and Mr. Balentine of C.P.S. appeared before our Society at a regular meeting, and we could ask plenty of questions that they could not answer. We are cooperating, we do not plan to disaffiliate.
5. Gerald L. Crimshaw, M.D., Oakland, gave an illustrated lecture on the medical and surgical treatment of subacute and chronic Bronchitis and Bronchiectasis.
6. Dr. B. Marden Black of the Mayo Clinic—Surgery of the Thyroid and Parathyroids.
7. Dr. Richard Brown, of University of California, discussed Urinary Antisepsis.
8. Dr. Francis L. Chamberlain—Hypertensive Diseases.
9. Dr. Frank A. McDonald, Councilor 8th C.M.A. District.

Regarding special sessions. I would like to explain that these were almost entirely pertaining to the hospital situation in the local community, which has now been quite successfully worked out to the satisfaction of all concerned. About twenty hospital bed units are now under active construction. The Hospital Relations Committee and the members of the Society spent many hours conferring together with the Yuba County Board of Supervisors and finally worked out a highly satisfactory plan—whereby a resident physician is employed at the County Hospital chosen by the Medical Society and hired by the County Board of Supervisors with about twenty members of the County Medical Society cooperating as attending men and consultants. This has been worked out to a high degree of perfection—and all is calm and orderly and well operated at the Yuba County Hospital. Ward rounds and Clinical Conferences are held each Friday noon at the Yuba County Hospital—a luncheon is served, which always insures a good attendance. Visiting physicians in Marysville are cordially invited to attend these county hospital conferences.

A General Practitioners Section which was organized in 1946 has held several interesting meetings. The officers for 1948 are: Chairman, Robert L. Hamilton, M.D.; Vice-Chairman, Francis P. Wisner, M.D.; Secretary-Treasurer, Glenn E. Blackwelder, M.D.

For a number of years the Yuba-Sutter-Colusa Medical Society has encouraged the attendance at the summer camps of Boy Scouts, Girl Scouts, Camp Fire Girls, etc., by extending the courtesy of free pre-camp physical examinations. Accordingly, a notice to this effect was published in the local press early in the summer.

We lost one member, Dr. Pieter Samson, who died suddenly August 11, 1947, of a heart attack.

The welfare of the Yuba-Sutter-Colusa County Medical Society for 1948 will be in the hands of our lady physician, whom we have decided to honor with the presidency, Dr. Ermorine Edwards; Vice-President, Benjamin F. Miller, M.D.; Secretary-Treasurer, Leon M. Swift, M.D.

We are expecting 1948 to be a most important year.

LEON M. SWIFT, *Secretary*

Sacramento Society for Medical Improvement

Organized in 1868, the Sacramento Society for Medical Improvement meets on the third Tuesday of each month, except during July and August. Meetings are held, alternating yearly, in the Auditorium of Sutter Hospital and of Mercy Hospital. The December meeting is devoted to business and the election of officers.

The following programs were presented during 1947.

January: Drs. Wm. VanDenBerg and Howard Black discussed certain neurosurgical problems, and Dr. Wm. McCarthy talked on the work of the Cancer Committee.

February: Dr. Curtis Smith of San Francisco discussed various aspects of Blood Bank organization and operation.

March: Annual Banquet.

April: Dr. Norman Freeman of San Francisco gave a paper on Thrombo-Embolism.

May: Dr. Franklin I. Harris of San Francisco discussed the role of intubation in intestinal obstruction.

June: Dr. Roland Davison of San Francisco gave a paper on the treatment of arthritis.

September: Dr. William Neff of San Francisco spoke on certain aspects of anesthesiology.

October: Dr. Carleton Mathewson of San Francisco discussed Carcinoma of the Pancreas.

November: Dr. Herbert F. Trant of San Francisco gave a paper on Vaginal Smears and Carcinoma.

December: Annual Business Meeting.

The Society has 209 active members, and one honorary member. Two died during the year, Drs. James E. Murphy and Herbert F. True. There are six retired members.

EDMUND E. SIMPSON, *Secretary*

The Shasta-Trinity County Medical Society

The Shasta-Trinity County Medical Society has 23 members. Three men will be eligible for membership in the next month or so and one man is requesting transfer from another society.

The County Medical Society holds its regular meeting on the second Monday of the month, except during the summer months of July and August.

JULIUS M. KEHOE, *Secretary.*

Tehama County Medical Society

The Tehama County Medical Society at its regular meeting, January 27, 1948, elected the following officers for this year: R. G. Frey, M.D., President; James T. McDuffie, M.D., Vice-President; A. H. Meuser, M.D., Secretary and Treasurer. Dr. O. T. Wood was elected delegate and Dr. R. G. Frey, alternate.

A. H. MEUSER, *Secretary*

Yolo County Medical Society

During the year 1947, the Yolo County Medical Society established a Tumor Clinic in Yolo County, which has been active now for a year. The procedure to be followed is that only patients seen by their physician can be presented to the Board. The physician will give the history and physical findings. The Tumor Center is open to all people regardless of financial status.

A Cancer Clinic was arranged and will be held in January of 1948, along with its refresher course. Monthly meetings, except for July and August, were held with prominent speakers from various parts of the state taking an active part.

New members admitted were Drs. Robert Brundage, Theodore McCarthy, and F. J. Peters. Transfers from this Society were Drs. John Gray, W. D. Garcelon, G. R. Laird, and Wilfred Robbins.

HENRICK S. GRAESER, *Secretary*

The Lassen-Plumas-Modoc Medical Society

The Lassen-Plumas-Modoc Medical Society held two meetings during the past year. President W. C. Batson arranged a very excellent program of speakers. At a winter meeting in Susanville, Dr. Ernest W. Mack and Dr. Kenneth Maclean, both of Reno, spoke to us. At a spring meeting in Greenville, Dr. Hardgraves and Dr. E. L. Bruck, both of San Francisco, spoke to us. Meetings are all called by the president.

J. Paul McKenney, *Secretary*

Placer-Nevada-Sierra County Medical Society

There were a total of eight meetings during the year.

1. The annual meeting was held at the Freeman Hotel, Auburn, Calif., on November 9, 1946. The present officers were retained for the ensuing year as follows: President, Paul D. Barnes, Loomis; vice-president, Harry N. March, Grass Valley; secretary-treasurer, Vernon W. Padgett, Grass Valley. Delegate to C.M.A., Wm. M. Miller, Auburn; alternate, C. E. Lewis, Auburn. Visitors to the meeting were Dr. John Dement and Dr. Ellis Sox both of the State Department of Health, both of whom discussed matters pertaining to the public health. Dr. Sox discussed the Forrest Hill Public Health Project and reviewed the accomplishments of their clinics. Dr. G. D. Tipton offered DeWitt Hospital as a place for subsequent meetings for our Society and invited the members for dinner on December 12, 1946.

2. Meeting December 12, 1946 at DeWitt Hospital at which time members were the guests of Dr. G. D. Tipton, superintendent of that institution. Twenty members and 11 guests were present. Dr. Lynn Smith of Colfax was in charge of the program and had as guest speaker, Dr. Schuyler Pulford of Sacramento who talked on Diabetes, Diet and Insulin in Uncomplicated Cases. This was a very instructive talk for the general practitioner and Dr. Pulford pointed out pitfalls, methods of diagnosis, calculation of diets, tests of various kinds, and when to use insulin and when not to use it.

3. Meeting January 23, 1947 at DeWitt Hospital, Auburn. Twelve members and guests were present. Two guests from the Farm Bureau discussed a group coverage Health Insurance Plan sponsored by the Farm Bureau. Dr. John W. Ballou and Dr. Walton Prescott both of Grass Valley were elected to membership in our Society. Short case discussions were given by the following members: Dr. Conrad Briner, Auburn, Hypoglycemia; Dr. Bernard Hummelt, Nevada City, Premature Separation of Placenta; Dr. Lynn Smith, Colfax, Industrial Coronary Occlusion.

4. Meeting March 6, 1947 at DeWitt Hospital, Auburn. Twelve members and seven guests were present. Dr. Frank M. Olrich of Auburn was elected to membership. Dr. Max Dunievitz of Auburn introduced the speaker of the evening, Dr. Paul Guttman of Sacramento whose subject was the Rh Factor. Dr. Guttman discussed the basic principles, clinical manifestations, treatment, prophylaxis, and significance of the Rh factor.

5. Meeting April 10, 1947. DeWitt Hospital, Auburn. Nine members and seven guests were present. One of the guests was Dr. Frank A. MacDonald, District Councilor from Sacramento who discussed the Farm Bureau Federation Health Insurance Program. Dr. Robert Eveleth, Roseville, program chairman, then introduced the guest speaker, Dr. Adolph T. Agaard of Sacramento. Dr. Agaard spoke on Coronary Heart Disease and gave a very instructive talk outlining the disease from anatomical and clinical points of view ending with a thorough outline of treatment.

6. Meeting May 15, 1947. DeWitt Hospital, Auburn. Ten members and two guests present. Dr. Waldo H. Pate was accepted into our Society. Dr. Norbert Frey of Nevada City introduced the guest speaker, Dr. Arthur Koepsell, Sacramento, who spoke on Obstetrical and Gynecological Problems.

7. Meeting June 17, 1947. DeWitt Hospital, Auburn. Eleven members and six guests were present. The program was in charge of Dr. G. D. Tipton and given by members of his staff at DeWitt Hospital. Mental disease in the U.S. was discussed in a general way and from there specific types of disease were taken up, a demonstration of electric shock treatment being shown the members and guests. Dr. Tipton, medical superintendent of DeWitt Hospital outlined the organization of the State Hospital System and the State Department of Mental Hygiene.

8. Meeting October 15, 1947. DeWitt Hospital, Auburn. Sixteen members and six guests were present. Dr. Louis Jones, Roseville, introduced the guest speaker, Dr. Frank A. MacDonald, Sacramento, Councilor of the Eighth District of the C.M.A. who talked to the members on "What's Going on and What We Might Expect in Medicine" from a political point of view. He took up the background of the Warren Compulsory Health Plan, State Board of Health Measures, the Taft Bill, the Murray-Wagner-Dingell Bill, Prepayment Medical Plans, etc. Public Relations activities of the C.M.A. were also discussed.

Vernon W. Padgett, *Secretary*

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John W. Green, Vallejo, *Councilor.*

Humboldt County Medical Society

The year of 1947 saw an increase of approximately 15 per cent in the number of physicians in practice in this County. It is expected that these new men will all soon be members of the Society.

The Society held a number of interesting dinner meetings during the year and it has been noted that this type of meeting draws the largest attendance.

Three new hospitals for the county are in the process of development, one in Fortuna and two in Eureka. These new facilities will be greatly appreciated by the Society members.

Plans are under way for the establishment of a Memorial Scholarship Fund honoring the Society members who lost their lives during the recent war.

Death has taken two of our members during the latter part of the year, Dr. C. C. Falk, Sr. of Eureka and Dr. Rupert V. Hauser of Scotia.

John S. Chain, *Secretary*

Napa County Medical Society

The Napa County Medical Society had a successful year under the presidency of Dr. T. K. Miller. Membership, (including retired) is now 45. The Society greatly regrets the death of Dr. A. S. Oliver, long a member. Meetings were regularly held; well attended and instructive speakers were provided. National issues such as socialized medicine were presented and discussed, State proceedings were ably reviewed by Dr. John Green of Vallejo, Dr. Dwight Murray of Napa and others; matters of local concern, including the cancer drive, public health, etc., were energetically pursued. The annual meeting was held at the Yountville Veterans Home with Colonel Holderman and his medical staff as able hosts. Officers elected for 1948 were: President, Dr. Walter H. Brignoli; vice-president, Dr. M. M. Booth; secretary-treasurer, Dr. C. C. Caulkins. Meritorious mention was accorded Dr. Booth who served the Society well as its secretary-treasurer for the past 18 years.

C. C. Caulkins, *Secretary*

Solano County Medical Society

The Society enjoyed a progressive year highlighted by numerous excellent addresses at the regular monthly meetings by various eminent professional men of this vicinity.

During the January meeting there was a discussion of the purchase of the Vallejo Community Hospital. In February the Vallejo General Hospital Corporation was formed, open to all members of the Society, after it was found impractical to purchase the Vallejo Community Hospital. Also at that meeting Mr. Raymond Taibl spoke on the recent advances in the treatment of cerebral palsy.

At the regular meeting in March, Dr. Herbert Lawrence addressed the Society on the subject of Penicillin Treatment in Dermatology.

The April meeting lecture was given by Dr. Klein, Proctologist, of Stanford University, who spoke on Carcinoma of the Colon and Rectum.

The Society held its regular June meeting, a dinner-social, at John's Place in Benicia at which time the group adjourned for the summer.

At the September meeting Dr. Dallas, Professor of Obstetrics at Stanford University, gave a very interesting and comprehensive lecture on Obstetrical Emergencies.

The Society was addressed in October by Mr. Thomas O'Dea, local representative for C.P.S. in this community, who reported the continuing progress of C.P.S. His talk was followed at the November meeting by Dr. Larsen, Medical Director of C.P.S., who spoke on the present status of C.P.S. and the place of the Veterans Program in that organization.

At the December meeting officers for the following year were elected:

President, Dr. Felix Rossi; Vice-President, Dr. Charles H. Widenmann; Secretary-Treasurer, Dr. Bernard V. O'Donnell; and Delegates to the C.M.A., Dr. H. Randall Madeley and Dr. Felix Rossi.

During the year Dr. J. J. Couperus transferred to the Sacramento County Medical Society, and Dr. Clark T. Alexander and Dr. N. J. Crisp passed away. Drs. Carl Reichman, William J. Olsen, Albert Cohn, and Harry G. Lammel were added as new members to bring the present membership to fifty-seven.

BERNARD V. O'DONNELL, *Secretary*

Sonoma County Medical Society

The membership of the Sonoma County Medical Society now numbers 73. Dr. F. E. Sohler, Sr., of Healdsburg, died on December 29, 1946, following our last report. One member transferred to another County Society and eleven new members were added during the year 1947.

Ten meetings were held during the year, with an increase of approximately 25 per cent in attendance over the previous year. No meetings were held in July and August. The members of the Society were dinner guests of Dr. Butler at the Sonoma State Home in May.

The November meeting was a joint meeting of the Society and the Ladies' Auxiliary, at which time a number of new doctors and their wives were introduced. The program at this meeting was a discussion of cancer by Dr. L. Henry Garland of San Francisco.

RAIMOND F. CLARY, *Secretary*

Marin County Medical Society

The Marin County Medical Society again made a good showing for the year 1947. The present membership is 66. One old member passed away and one left the county. Three members have been accepted by transfer from other societies and three have been accepted on presentation of credentials.

Nine monthly meetings have been held during the year, also one four-county meeting. All were well attended. Good fellowship generally exists in the society.

All the doctors are busy in all the specialties as well as medicine and surgery. The nursing situation is improved somewhat. Fewer special nurses are called than formerly.

The hospital situation continues about the same. Beds are always at a premium. The bond issue which would have built a new hospital failed. This was a great disappointment to all the profession, but it is expected another try at it will be made in the early summer.

The obstetrical situation is about the same. Many of the mothers go home on the 4th or 5th day. Many of the obstetrical cases are taken care of at the Hamilton Field Hospital which helps the situation generally. All the cases are delivered in the hospitals.

CARL W. CLARK, *Secretary*

The Mendocino-Lake Medical Society

At the annual meeting of the Mendocino-Lake Counties Medical Society for the purpose of election of officers, delegates and reports of the various committees, Clemens M. Beil was reelected President and E. C. Bennett, Secretary-Treasurer. Clemens M. Beil was elected as Delegate to the State Convention and David B. Williams elected his alternate.

Our Society consists of twenty members, active, and one honorary member. Eleven of our members served in the military service and all have returned and reestablished their practices.

The Mendocino State Hospital is located in our district and affords us a rare opportunity to study mental illness first hand. The staff of the hospital is probably one of the most capable in the state and many of them are members of our Society, including the Superintendent, David B. Williams, and Assistant Superintendent, Robert Bramcamp.

E. C. BENNETT, *Secretary-Treasurer*

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(Continued from Front Advertising Section, Page 30)

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(Continued on Page 36)

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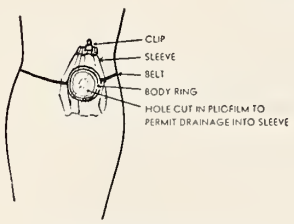
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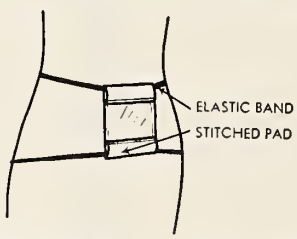
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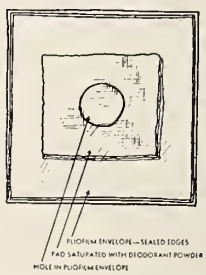
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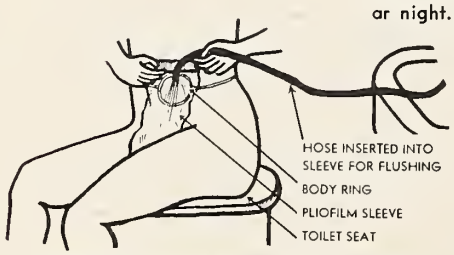
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(Continued from Page 34)

in the nation and to urge on these societies the initiation of the necessary steps toward ridding medical practice of these parasites. The Better Business Bureaus in several large communities, notably Los Angeles, have begun a campaign of enlightenment of the public regarding the extent to which these abuses prevail in their communities; they too have called on the medical profession to take the necessary steps to stop this pernicious practice.

The housecleaning has been too long delayed. Biology has proved that any living organism that tries to maintain itself in the presence of filth invariably dies. The board of trustees of the American Medical Association therefore calls on leaders of the medical profession in every community in which the association is represented to act promptly, remembering, however, the necessity for proceeding in due form by the filing of formal charges against physicians known to be participating in such methods, thus offering an opportunity for the presentation of evidence and a suitable hearing so that the innocent may not be harmed but the guilty may be properly exposed and punished.

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*Barr, Joseph S., *Ruptured Intervertebral Disc and Sciatic Pain*, Jr. Bone and Joint Surg., 29: 429-437 (April) 1947.

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One should suspect that a disease is psychosomatic when a patient shows signs of sabotaging his own cure, writes Andrew D. Hart, M.D., Charlottesville, Va., a member of the Department of Internal Medicine of the University of Virginia School of Medicine, in a recent issue of *The Journal of the American Medical Association.*

A psychosomatic disease is one in which organic changes arise from the ways in which the patient reacts to personality conflict and insecurity. Yet "patients with psychosomatic disease may show little or no evidence of emotional instability," Dr. Hart points out. This, he says, adds to the doctor's difficulty in diagnosis only if he fails to recognize that the outward symptoms of psychosomatic illness are valuable to the patient precisely because they substitute for a more open expression of inner conflicts which the patient feels inadequate to face. He has learned to live with illness: he has not learned to live with himself.

"Although an ill person must consciouly and rationally attempt to seek relief for manifest symptoms and disability, there are unconsciously motivated resistances to such attempts that block their success. Indeed, it might be expected that every dynamic resource of the organism would be called into action to protect the illness and maintain its expressions until the greater threat to personality security had been lessened or resolved," Dr. Hart writes.

Among the many ways in which such patients resist cure, he mentions the following:

1. Procrastination in seeking medical attention. "Patients with psychosomatic complaints are seldom seen early in the course of their illnesses."

2. Self treatment. "Many patients indulge in self diagnosis and protracted self treatment, despite the availability and rationale of adequate medical care. . . . It is perhaps the most reliable characteristic of patients with psychosomatic illness that in submitting to medical care they reserve for themselves a greater independence of action in decisions as to choice of procedure and detail of treatment."

3. Sabotage of treatment: "Broken diets, renewed habits, unfilled and unopened prescriptions, forgotten medications, fractured routine and disregarded advice."

4. Broken appointments. "In many instances only an initial appointment is kept and it is apparent that the person has acquiesced in consulting the physician as a gesture only and is not seriously entertaining plans for treatment."

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(Continued on Page 44)

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MOST PSYCHOSOMATIC PATIENTS FEAR CURE MORE THAN DISEASE

(Continued from Page 40)

advice, hopeful reliance on patent remedies, an enthusiasm for medical fads and support of the cults. There is an inappropriate bent and loyalty to methods and systems that temporize with illness through policies of suggestion, reassurance and palliation."

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(Continued on Page 46)

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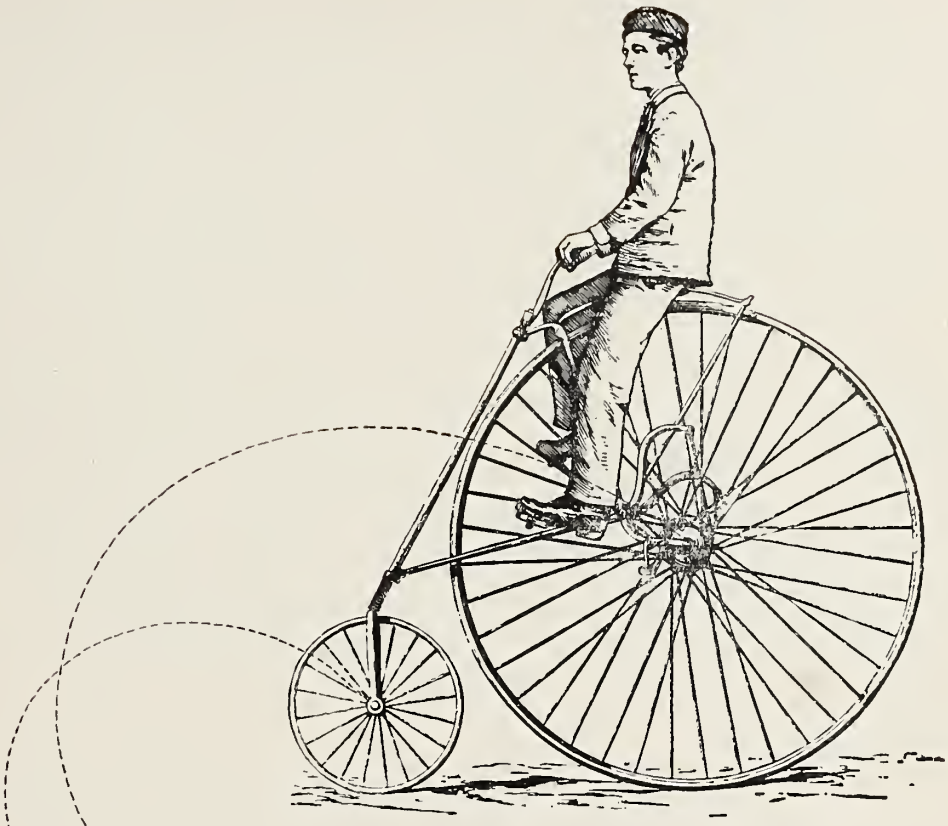
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MOST PSYCHOSOMATIC PATIENTS FEAR CURE MORE THAN DISEASE

(Continued from Page 44)

or external factors in the basic insecurity situation, a resolution of the total illness is impending," Dr. Hart concludes.

"On the other hand, patients who injudiciously allow external pressures to force them into premature or hasty treatment and decision may become seriously anxious and depressed unless illness equivalents have been effectively established. A physician-patient relationship may constitute such a substitution and in competent treatment should serve as a bridge to the development of other identifications compatible with reeducative goals and health."

DR. FLOREY EXPECTS TO SEE NEW ANTIBIOTICS USED IN MEDICINE

In all probability new antibiotics which will find a place in medicine will be discovered during the next few years; writes Howard Florey, M.D., Oxford, England, in a recent issue of *The Journal of the American Medical Association.*

In 1945 Dr. Florey was awarded the Nobel Prize for his work on penicillin, the antibiotic which thus far has proved of greatest clinical value. In the search for other antibiotics which can be put to use in medicine, however, Dr. Florey points out that surveys have been made of enormous numbers of organisms. A great number of antibacterial sub-

(Continued on Page 52)



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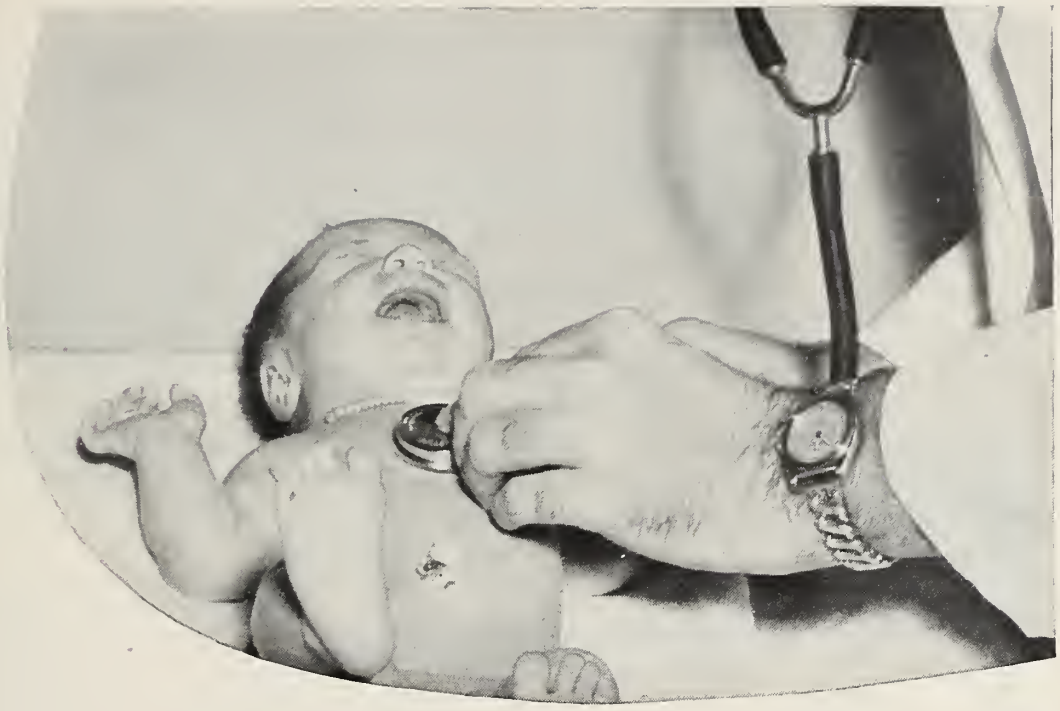
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DR. FLOREY EXPECTS TO SEE NEW ANTIBIOTICS USED IN MEDICINE

(Continued from Page 46)

stances other than penicillin and streptomycin have been isolated and tried in the clinic, and some have already met many of the requirements which he lists as desirable for any antibiotic that is to be used as a systemic therapeutic agent.

These requirements are:

1. It must have a powerful action against some bacteria.

2. It must be more active against some bacteria than against others.

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4. It must be active in the presence of body fluids as well as in the test tube.

5. It must not be destroyed by tissue enzymes.

6. It should be stable. (Penicillin is not.)

7. It should not be too rapidly excreted by the kidneys. (Penicillin leaves the body very quickly.)

8. It should not be capable of producing in infecting bacteria resistance to the chemotherapeutic drug itself. (Bacteria eventually become resistant to streptomycin and, to a lesser degree, to penicillin.)

"Over and above this direct search for antibiotics useful in medicine, bonuses are accruing which may be of the greatest use in the future," Dr. Florey con-

(Continued on Page 54)



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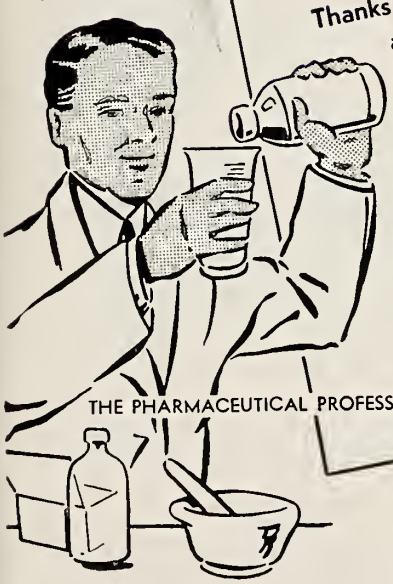
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DR. FLOREY EXPECTS TO SEE NEW ANTIBIOTICS USED IN MEDICINE

(Continued from Page 52)

cludes. "It is fair to say that the employment of modern chemotherapeutic agents necessitates a good knowledge of bacteriology by the practitioner of medicine, and I think that modern therapeutics has brought nearer together the sciences of bacteriology and of practical medicine. And in addition every study of the action of an antibiotic throws some light on the life process of bacteria."

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STREPTOMYCIN AND SULFADIAZINE USED TOGETHER IN BRUCELLOSIS

How combined treatment with streptomycin and sulfadiazine brought about complete recovery in an unusually stubborn case of human brucellosis is reported in a recent issue of *The Journal of the American Medical Association* by C. Wesley Eisele, M.D., and Norman B. McCullough, M.D., from the Department of Medicine. School of Medicine, University of Chicago.

The case suggests that an effective treatment for this baffling disease. which in the United States is exceeded in importance by only three other communicable diseases—tuberculosis, syphilis and gonorrhea—may at last have been found.

Brucellosis is transmitted to humans by contact with diseased hogs, goats or cows, or by drinking the milk of infected animals. In its acute form the symptoms may easily be confused with those of

(Continued on Page 56)

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STREPTOMYCIN AND SULFADIAZINE USED TOGETHER IN BRUCELLOSIS

(Continued from Page 54)

typhoid fever, acute tuberculosis, malaria, acute rheumatic fever, influenza and other diseases; in its chronic form, which is much more common, the disease is even harder to diagnose. Relapse and recurrence of symptoms even after apparent recovery are common. In the early days of the sulfonamide compounds and of streptomycin, enthusiasm for their efficacy in treatment ran high, but neither drug by itself proved particularly effective against the bacteria of brucellosis except in the test tube.

In the case cited by the writers, an acutely ill patient was hospitalized five months after he had begun to have daily attacks of chills, fever and dizziness. A diagnosis of undulant fever was made, and he was given penicillin and blood transfusions. He improved enough to leave the hospital after 10 weeks, but shortly afterward he was admitted to another hospital with a high fever and other symptoms. In spite of prolonged streptomycin treatment his blood tests remained positive for the bacteria of brucellosis, and after three months there was no improvement.

Finally a 28-day course of sulfadiazine treatment was started. The patient still showed no improvement until streptomycin was combined with the sulfadiazine during the last 10 days. After termination of this combined treatment blood tests for the bacteria of brucellosis were negative for the first time, and the patient's fever dropped and remained around normal. He recovered completely, and after 17 months had had no relapse.

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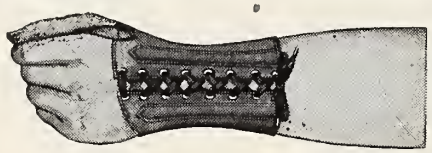
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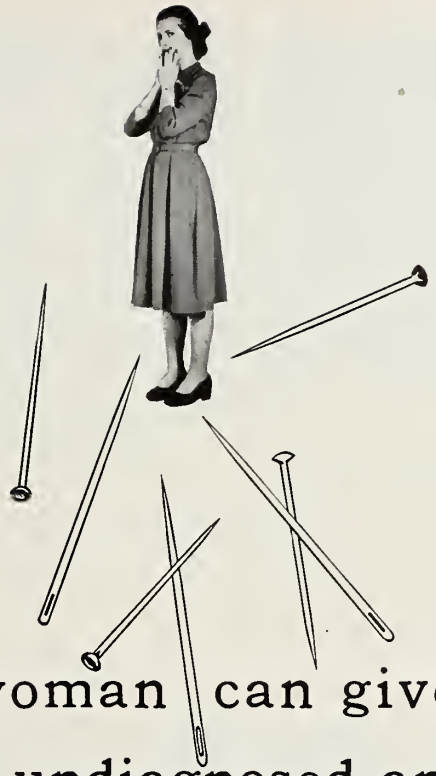
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"The problems of the chronically ill will be solved only when there is complete cooperation and coordination of the many agencies now concerned with such diseases," writes Morris Fishbein, M.D., in the current issue of *Hygeia*, health magazine of the American Medical Association.

The editorial follows:

"Each year chronic diseases cause almost a million deaths. At least a billion days of productive work are lost through chronic disabilities. In 1900 one person in 25 in the United States was 65 years of age or older. Gradually life is being extended for more and more people; population experts estimate that 10 per cent of our population is over 65 years of age today.

"The most important chronic diseases are heart disease, hardening of the arteries, high blood pressure, nervous and mental diseases, arthritis, diseases of the kidney, tuberculosis, diabetes and asthma. So important have these conditions become that four leading medical organizations, including the American Hospital Association, the American Medical Association, the American Public Health Association and the American Public Welfare Association, joined recently in a consideration of the planning necessary for the chronically ill.

"A chronic disease is one that may be expected to require an extended period of medical supervision and care in a hospital or an institution with nursing. In eight states—California, Connecticut, Illinois, Indiana, Maryland, Massachusetts, New Jersey and New York—official action is being taken toward solving the problem. Moreover, four cities—Chicago, Cleveland, Milwaukee and New York—are also giving the subject official consideration. Chronic illness affects nearly every family. More than one-sixth of our population, including as many as 25,000,000 persons, are reportedly subject to some one of the diseases that have been mentioned. Special provisions have been made for tuberculosis and mental diseases, but little has been done for some of the others. Incidentally, chronic diseases are not necessarily diseases of the aged. At least one-half of persons who are chronically ill are below the age of 45, and 16 per cent are under 25 years of age. The problems of children, particularly such as are chronically ill with rheumatic fever, are especially important.

"As with many other medical problems, the answer to some of the difficulties in the field of the chronically ill can be solved by research. There are already research projects on kidney diseases, hardening of the arteries, malaria and hardening of the liver. Unfortunately, however, not nearly enough beds are available in hospitals with adequate laboratory and research facilities to attack these problems with all of the knowledge and technics that modern medicine has available. Through the National Institute of Health research is being undertaken against heart disease, cancer and mental disease.

"Some positive suggestions must be kept in mind in the solution of the problems of the chronically ill. care are situated on the outskirts of cities or even in rural areas difficult to reach. Hence the medical

(Continued on Page 60)

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Nowadays, except for a few rare cases, the removal of an appendix is not considered a serious operation. And many operations which were considered of major seriousness as recently as 1930 are now often relatively simple.

Because of notable advances in training and surgical skill, many of the risks have been almost eliminated. Complications following operations are far less common. And most patients recover in a shorter time, and with less discomfort than formerly.

Such progress in surgery has been hastened by significant developments in four important fields.

1. Anesthesia. The administration of anesthetics has become a specialized science. New anesthetics have been developed—less toxic, less upsetting to respiration and heart action. With modern anesthesia the patient has a far easier time when undergoing surgery. Post-operative nausea and vomiting, which were previously almost taken for granted, are now much less frequent.

2. Infection-fighting drugs. Peritonitis, once feared as a frequent complication of abdominal surgery, today is uncommon. The use of such agents as the sulfa drugs and penicillin—to treat infection or to guard against it—has almost eliminated many of the infections which formerly constituted the greatest dangers in surgical procedures.

3. Early ambulation. Doctors have found that getting patients out of bed soon after operations not only speeds recovery, but also prevents many of the discomforts formerly suffered. Bowel and urinary functions are quickly restored. Gas pains are usually avoided. It is not unusual nowadays for a patient to be well enough to go home from the hospital in less than ten days after a major operation.

4. Body Nutrition. One of the problems in surgery has been that the condition which makes an operation necessary is usually one which has depleted the patient's nutritional reserves, and therefore lessens his ability to recover promptly from the operation itself.

In recent years, however, medical science has broadened its knowledge of body nutrition.

Today, it is possible to determine in what a patient's body is deficient—whether he needs whole blood, vitamins, salts, carbohydrates, protein.

Each of these elements can be replaced—making it far easier for the patient to go through an operation. Post-operatively, also, recovery is hastened by supplying the body's needs in easily assimilated form.

SEE YOUR DOCTOR. Give him your complete confidence at all times. If he advises an operation, follow his recommendation promptly. With modern surgery, with modern hospital care, you have little reason to be afraid.

Remember, too, that when surgery is indicated, a delay may be dangerous. Prompt action is likely to give you a quicker recovery—and an easier one!

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ONE OUT OF EVERY SIX IN U. S. SUFFERS FROM CHRONIC DISEASE

(Continued from Page 58)

advice available and the associated laboratories are not applied to either the care of those who are sick or to solving their problems. The care of the chronically ill is inseparable from general medical care. Probably hospitals for the chronically ill should be situated near to medical schools and teaching hospitals. The Veterans Administration has recognized this principle. Facilities for the care of the chroni-Far too often the institutions in which they receive cally ill should be planned for the community as a whole and not merely for the indigent. Many communities have institutions in which paupers are given care, whereas persons in the low income groups or even those well able to pay cannot have access to proper facilities. The major emphasis in caring for the chronically ill should be designed to return them to useful life in the community. Otherwise there comes to be a tendency simply to permit those who are chronically ill to lie until some secondary infection or other uncontrollable condition brings on death.

"The problems of the chronically ill will be solved only when there is complete cooperation and coordination of the many agencies now concerned with such diseases. The health, welfare and education

(Continued on Page 62)

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ONE OUT OF EVERY SIX IN U. S. SUFFERS FROM CHRONIC DISEASE

(Continued from Page 60)

departments, hospitals, medical societies, medical schools, social agencies, rehabilitation services and institutions in which the chronically sick and disabled are now cared for must work together to secure adequate knowledge of the need and to develop plans for progress in meeting the need."

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SURGERY CALLED ONLY HOPE IN RARE DISEASE, PANCREATIC CALCULOSIS

Pancreatic calculosis, a rare and painful disease in which calcium slowly accumulates in the pancreatic duct in scattered particles that eventually form stones, is described in the December 20 issue of *The Journal of the American Medical Association* by Lay Martin, M.D., and Jorge Diez Canseco, M.D., Baltimore, from the Department of Medicine of the Johns Hopkins University and Hospital.

The pancreas, located behind the stomach, is a gland whose secretions play an important role in digestion and carbohydrate metabolism.

In the past seven years, the doctors report only 11 patients with calcified areas in their pancreases have

(Continued on Page 64)



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SURGERY CALLED ONLY HOPE IN RARE DISEASE, PANCREATIC CALCULOSIS

(Continued from Page 62)

been recognized clinically at Johns Hopkins Hospital. A search through the autopsy records at the hospital revealed only 10 more.

A study of the 21 cases gave no clue as to the cause of the condition, which is characterized by severe attacks of pain in the upper abdomen, but showed that the greatest incidence of onset of symptoms lay between 35 and 45 years. Males were more frequently affected than females, and eight of the 21 cases had been alcoholics before their symptoms appeared.

"Most patients with this disease are in an unfortunate position," the doctors write. "In the course of its development they may look forward to years of pain, with only a hope that eventual atrophy of the gland will bring surcease. They may also look forward to a 25 per cent chance of acquiring diabetes. Many of them will probably not be able to withstand the pain, and they will become narcotic addicts. Many of them will become emaciated and weak from lack of food, for they will prefer starvation to the pain instituted by eating."

Medical treatment offers little, the doctors say. However, they report excellent results from some forms of surgical treatment.



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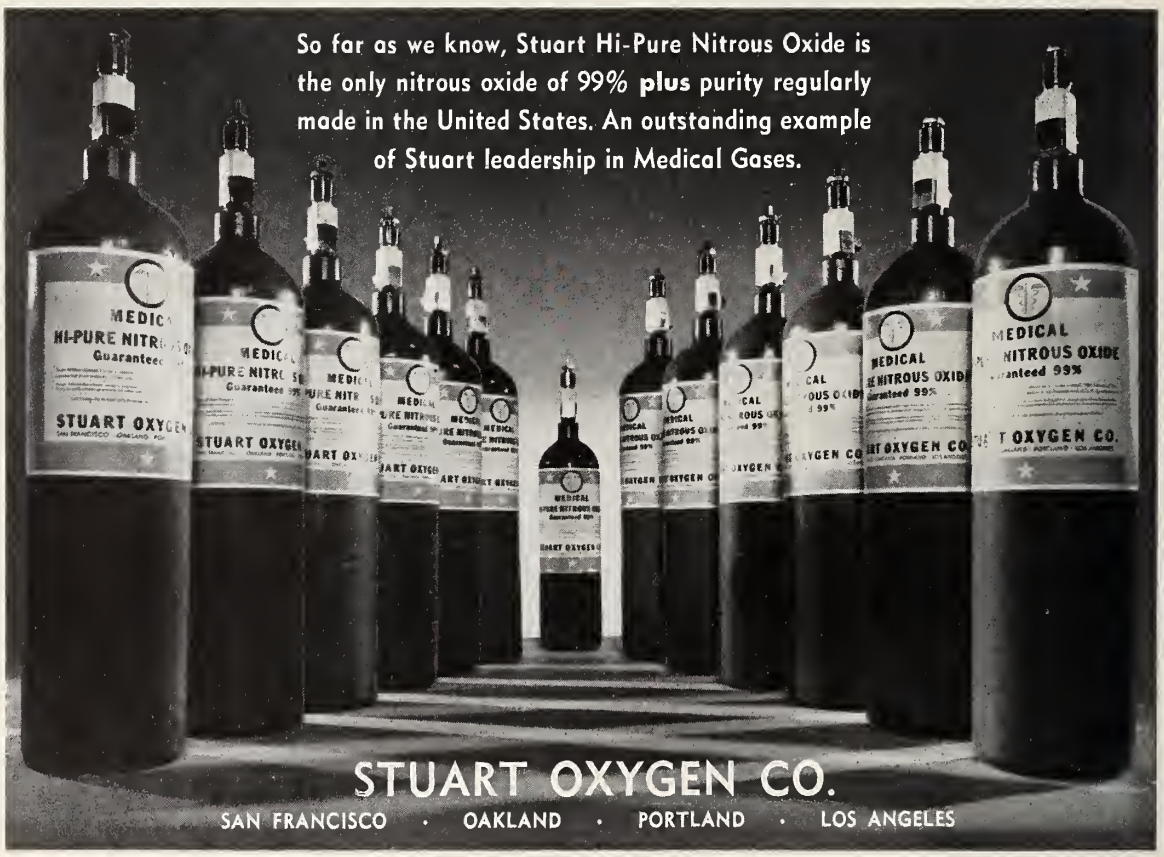
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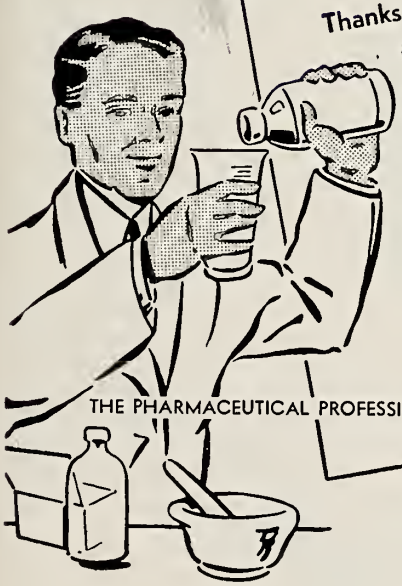
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AMOUNT OF PROTEIN IN DIET CAN SPEED OR RETARD CONVALESCENCE

Extra calories, vitamins and minerals in the convalescent diet of a surgical patient cannot substitute for adequate amounts of all the 10 essential amino acids found in high quality natural proteins such as beef steak, eggs and milk, says Paul R. Cannon, M.D., from the Department of Pathology, University of Chicago, in a recent issue of *The Journal of the American Medical Association.*

Amino acids are chemical compounds which make up protein. In the process of digestion proteins are broken down into these basic elements, which circulate freely in the blood until they recombine to build tissue.

Dr. Cannon bases his conclusion on a number of experiments carried out on albino rats. After being fed a ration low in protein the animals lost weight and became anemic, even though their diet had been adequate in calories, vitamins and minerals. The problem then became one of finding a diet that would rebuild their tissues as quickly and completely as possible—the same problem that must be met in feeding a convalescent surgical patient.

When these animals were kept on a ration barely adequate in calories, vitamins and minerals and completely lacking in protein, they continued steadily to lose weight, Dr. Cannon found. If, however, high quality protein was added to the ration, rapid recovery occurred. This remained true even when the calory content of the ration was somewhat decreased —although not when it was lowered more than about 30 per cent. Furthermore, merely increasing the ration's calory content did not cause the rats to gain weight proportionately. When the protein content of a high calory ration was changed, however, "convalescence proceeded in direct relation with protein content." This showed that protein rather than calories was the determining nutritive factor.

An assortment of the 10 essential amino acids is always found in high quality protein, along with others which are not absolutely essential to normal functioning. Dr. Cannon's experiments indicated that the absence of a single one of these 10 makes it impossible for those which are present to combine and build tissue. "Adult rats, whether protein-depleted or normal, lose weight and appetite when fed rations adequate in calories, vitamins and minerals and containing all the essential amino acids except one," he writes. Yet a protein-depleted rat can recover lost weight quickly when fed the same ration supplemented with only the 10 essential amino acids.

What is more, all 10 of these essential amino acids apparently must reach the tissues at approximately the same time. When the rats were fed two different rations at two-hour intervals—one containing five of the essential amino acids, one containing the other five—they quickly stopped eating and lost weight steadily. This seemed to show that individual amino acids are not stored in the liver or anywhere else, ready to combine with others, for much longer than an hour.

Naturally, Dr. Cannon points out, a convalescent patient must be able to digest and absorb whole pro-

(Continued on Page 12)

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AMOUNT OF PROTEIN IN DIET CAN SPEED OR RETARD CONVALESCENCE

(Continued from Page 10)

tein normally if the various amino acids in natural proteins are to reach his tissues simultaneously without losing their value. If he cannot do this, protein hydrolysates and protein concentrates—artificially produced—are the answer. "This does not imply, however, that high quality natural protein should not be fed, whenever possible, particularly for reasons of palatability and economy," he concludes.

Philosophy is the microscope of thought.

—Victor Hugo, *Les Miserables*

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The study, by Sol Roy Rosenthal, M.D., Eleanor I. Leslie, M.D., and Erhard Loewinsohn, M.D., Chicago, from the Tice Laboratory and Clinic of the Chicago Municipal Tuberculosis Sanitarium and the University of Illinois College of Medicine, appears in a recent issue of *The Journal of the American Medical Association.*

(Continued on Page 14)

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(Continued from Page 12)

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In the Chicago study, the first three years were spent entirely on research in animals. During the last 10 years human beings of every age group have been vaccinated, including newborn infants delivered at the Cook County Hospital of Chicago, infants born of tuberculous parents anywhere in Chicago, student nurses at the Cook County Hospital, medical students at the University of Illinois, children in a federal housing project and inmates of a mental institution.

Controls were selected from a population similar to the vaccinated. When tuberculosis was present in a household vaccinated persons were isolated until their tuberculin tests became positive in result, and controls were isolated for similar periods of time.

The writers report that:

(Continued on Page 16)

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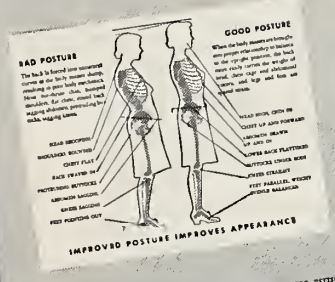
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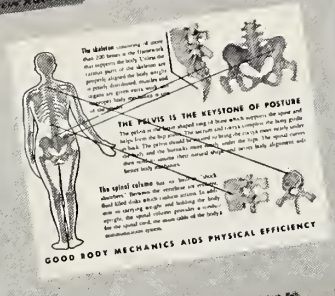
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BCG VACCINATION PROVES SAFE AND EFFECTIVE IN 13-YEAR STUDY

(Continued from Page 14)

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(Continued on Page 17)

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(Continued from Page 16)

cinated group followed for three to seven years. The expected tuberculosis rate was present in the control groups.

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MIXTURE OF SULFONAMIDE COMPOUNDS NOT RECOMMENDED IN MENINGITIS

A study made at the Gallinger Municipal Hospital, Washington, D. C., reveals that the advantages of using mixtures of sulfonamide compounds in the treatment of bacterial meningitis are apparently outweighed by the disadvantages.

The authors of the study, published in a recent issue of *The Journal of the American Medical Association*, are William W. Zeller, M.D., Harold L. Hirsh, M.D., Lewis K. Sweet, M.D., and Harry F. Dowling, M.D., Washington, D. C., from the Infectious Disease Service and the George Washington Medical Division of Gallinger Municipal Hospital,

(Continued on Page 20)



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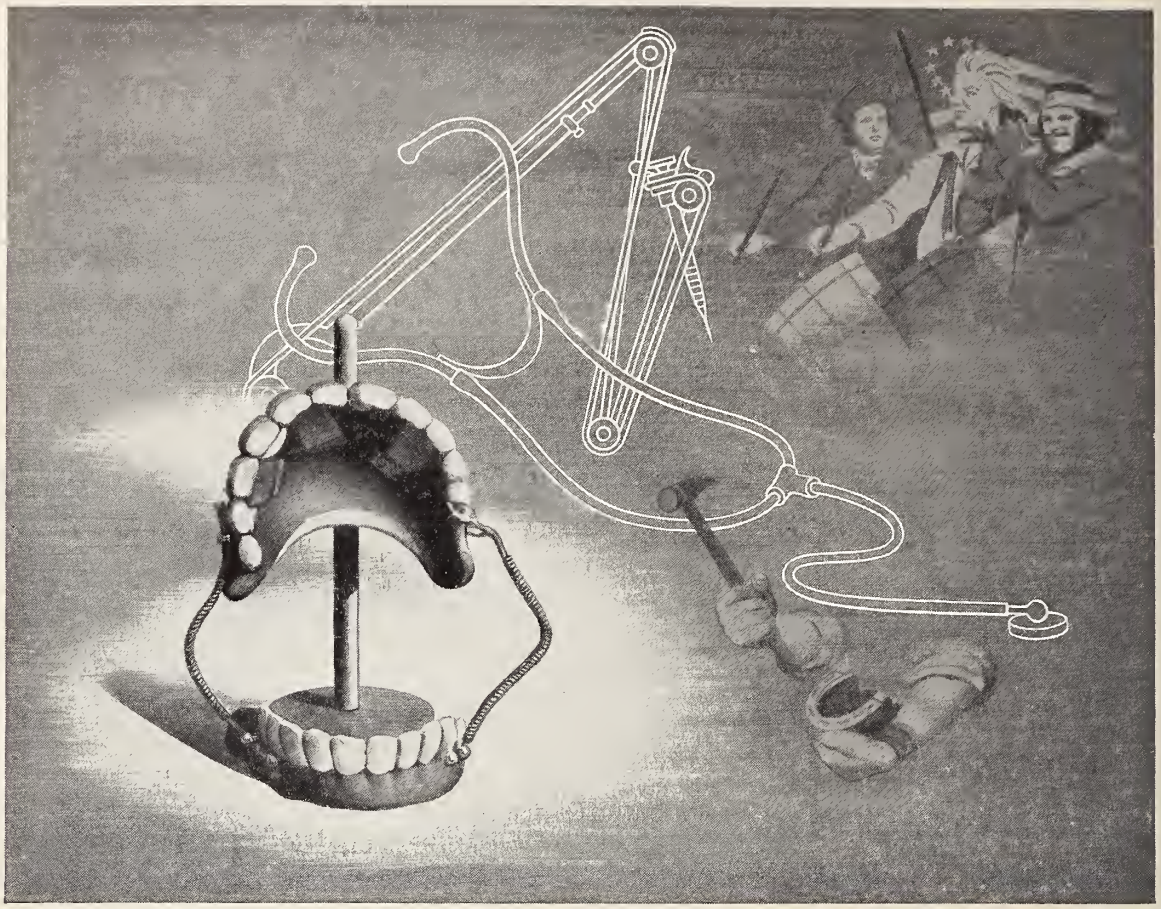


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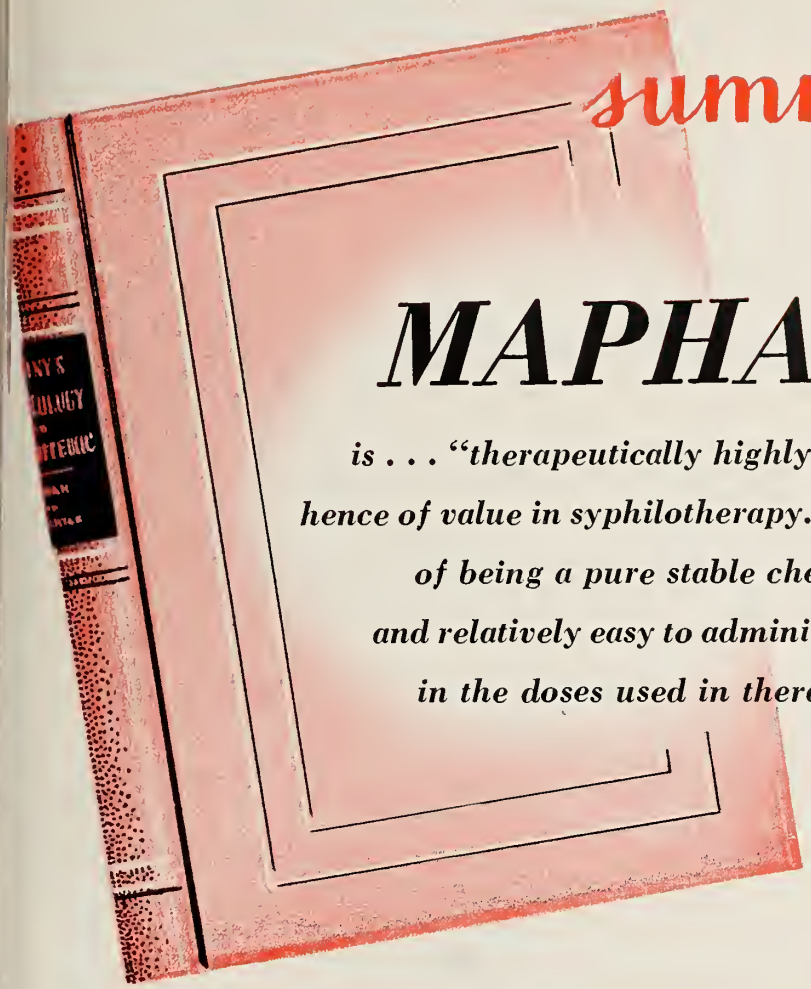
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MIXTURE OF SULFONAMIDE COMPOUNDS NOT RECOMMENDED IN MENINGITIS

(Continued from Page 17)

and from the Departments of Pediatrics and Medicine of George Washington University.

Bacterial meningitis is an infectious disease in which the meninges, the three membranes that envelop the brain and spinal cord, are inflamed. It takes a number of different forms, depending on the type of organism causing the infection. Previous studies have shown that the case-fatality rate in this disease could be lowered to approximately 10 per cent with the use of either sulfadiazine or sulfamerazine, but it was felt that it might be possible to reduce fatalities still further if larger doses could be safely administered. Larger doses of either drug alone proved very toxic.

Beginning in October, 1944, a mixture of the two drugs (which represented a 25 to 33 per cent increase over the single doses previously employed) was therefore tried on 135 patients admitted to Gallinger Municipal Hospital with the diagnosis of bacterial meningitis.

Comparing the results with those obtained in 186 patients who had received either sulfadiazine or sulfamerazine alone, the doctors found that the incidence of fever, rash and conjunctivitis [inflammation of the delicate membrane that lines the eyelids] attributed to the use of the mixture of sulfadiazine and sulfamerazine was 15.7 per cent, an increase over the incidence obtained when the drugs were used alone.

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SMALL NURSERY UNITS IMPROVE CHANCES OF PREMATURE BABIES

Although infants born prematurely in the United States in 1944 had about a 20 per cent better chance of survival than those born in 1934, improvement in methods of care of the premature infant after birth can reduce the mortality rate even further, three doctors state in a recent issue of *The Journal of the American Medical Association.*

The writers, Lewis A. Koch, M.D., C. A. Weymuller, M.D., and Elizabeth James, M.D., from the Long Island College Hospital, Brooklyn, N. Y., observe that premature birth still takes a higher toll of infant life than any other pediatric condition, and is one of 10 leading causes of death among the general population. (Any infant born alive, who weighs five pounds, eight ounces or less, whose heart beats or who moves is considered premature by the writers.)

"The prematurely born infant's chance of survival at the Long Island College Hospital has improved approximately 30 per cent during the past 10 years, and our survival rates compare favorably with reports from other centers," the doctors say. "It is our belief that new measures employed in our delivery rooms and extensive alterations in construction and nursing procedures in our nursery units, plus increased facilities and application of diagnostic procedures are the factors which have been responsible for our improved results."

One of the changes to which the writers give a great deal of credit is the alteration of the hospital's nursery units to make them as small as possible. For other small institutions which cannot finance the added nursing cost of maintaining a separate unit for premature infants, they recommend units containing an incubation bed for one premature infant and no more than seven beds for full-term infants. All eight should receive their complete care from one nurse. This system makes it simpler to prevent contamination and spread of infection, the doctors report, especially if each nursery unit also has its own medical equipment and supplies.

"From January 1, 1924, until January 1, 1940, 16,757 living infants were born at the Long Island College Hospital," the doctors state, "and 1,125 of these weighed five pounds, eight ounces or less at birth, an incidence of premature birth of 6.6 per cent. Of these 1,125 prematurely born infants 320 died, and over-all mortality from premature birth during this 16-year period of 28.4 per cent.

"From 1940, a period representative of completed changes in our nursery units for newborn infants, to January 1, 1945, 9,084 living infants were born on the same service and 637 of these weighed less than five pounds, eight ounces, or an incidence of premature birth of 7.0 per cent. Of these infants who were prematurely born, 104 succumbed, a fatality rate of 16.3 per cent, which, as mentioned, represents an over-all improvement of approximately 30 per cent.

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(Continued on Page 26)

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SMALL NURSERY UNITS IMPROVE CHANCES OF PREMATURE BABIES

(Continued from Page 22)

1940, but a gratifying improvement has been made in each weight division."

Statistics in a second article appearing in the same issue of *The Journal* suggest that continuous caudal analgesia, used in the management of labor and delivery, can also help reduce the mortality rate of premature infants.

The article is by Robert A. Hingson, M.D., Memphis, Waldo B. Edwards, M.D., Staten Island, N. Y., both U. S. Public Health Service surgeons, H. Charles Franklin, M.D., Memphis, an assistant surgeon in the U. S. Public Health Service, Clifford B. Lull, M.D., Philadelphia, and Frank E. Whitacre, M.D., Memphis. It analyzes results in several thousand deliveries under the caudal analgesia method at the U. S. Marine Hospital in New York, the Philadelphia Lying-In Hospital and the John Gaston Hospital in Memphis, and compares them with results in control series managed by other methods of relief from pain.

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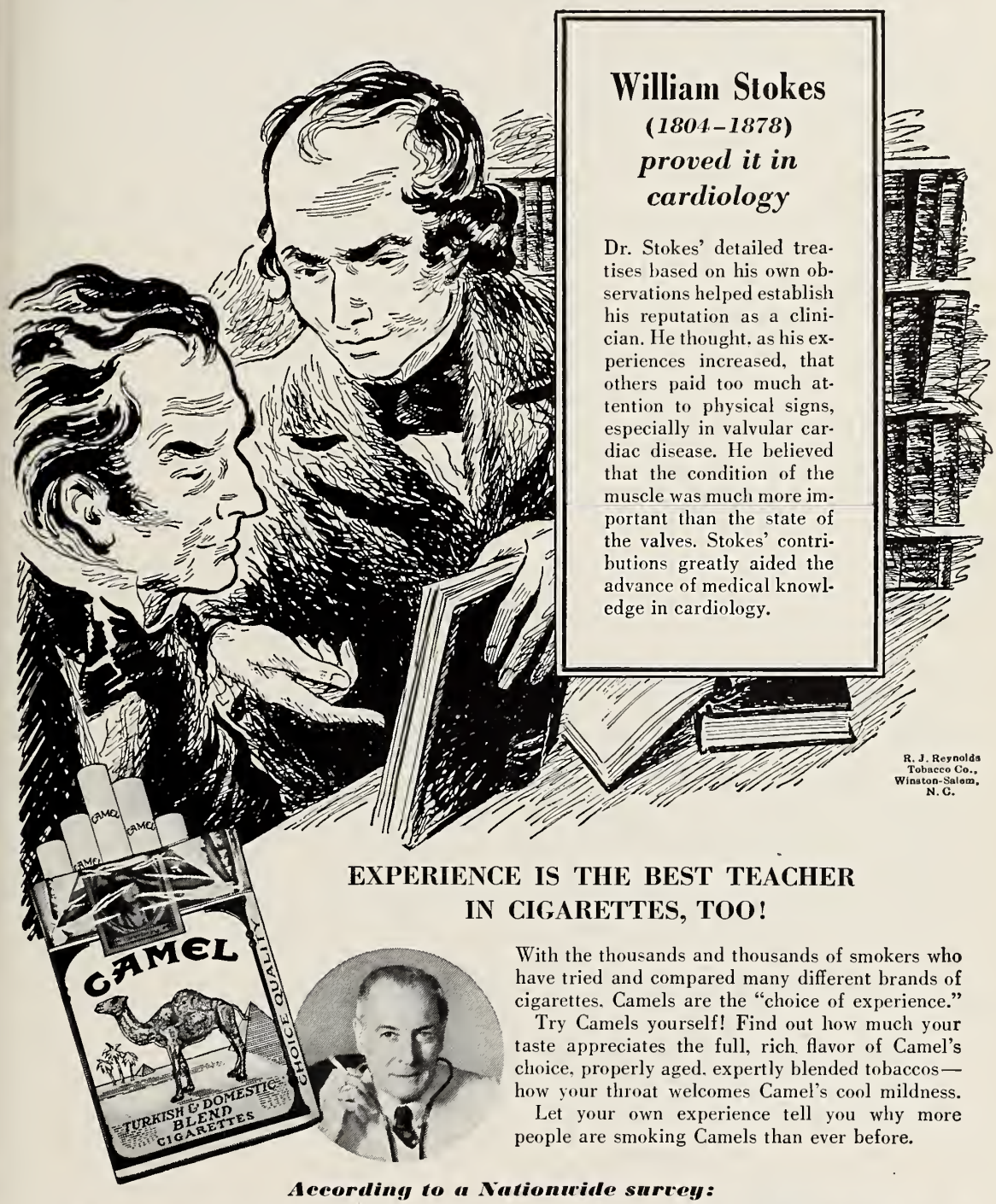
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In answer to a query in a recent issue of *The Journal of the American Medical Association* offers several suggestions on how to avoid airsickness and earache during long plane flights:

"To avoid ear discomfort due to inadequate eustachian tube ventilation, avoid flying during a common head cold or an active allergic rhinitis. When the ears feel full during ascent or descent, swallowing a few times ordinarily relieves this feeling. If stuffiness is not relieved, chewing gum and attempting to yawn may succeed in opening the tubes.

"The upright position with the head slightly extended on the neck favors opening of the tubes. If this is unsuccessful, close both nostrils and puff out the cheeks.

"If trouble is anticipated, either a benzedrine or a tuamine inhaler may be used to constrict the nasal and nasopharyngeal mucosa about 20 minutes before descent. Opening of the tubes either by swallowing or by auto-inflation is thereby facilitated. On some of the planes the stewardess is prepared to furnish a small balloon with a nasal tip for this purpose. The balloon is inflated with one nostril while the other is held closed. If simple inflation of the balloon doesn't open the tubes, the swallowing act is then carried out, the inflated balloon still being connected to the nose.

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VOL. 68 APRIL, 1948 NO. 4

Radicular Pain in the Upper Extremity

JOHN B. DOYLE, M.D., *Los Angeles*

THE problem of radicular or root pain continues to intrigue practitioners of medicine. It is of particular importance to the internist, the orthopedist, the neurologist and the neurosurgeon. With the knowledge that has accumulated in the past 13 years about syndromes due to abnormal states of the intervertebral discs,[4] root pain has evoked new interest and concern. The contribution of Semmes and Murphey[6] concerning unilateral rupture of the cervical intervertebral discs served to focus attention on a group of cases that have proved difficult to manage, and afforded explanations of certain clinical phenomena that had previously been subjects for widespread differences of opinion.

Many questions remain to be answered, however, about certain syndromes of which radicular pain in the upper limbs is an essential presenting symptom. There are those cases of pain in the shoulder, arm, or forearm, in which thorough studies reveal no objective evidences of disease; cases with lesions of the tendon cuff of the shoulder in which, in addition to pain in the shoulder and arm, there is root pain in the lower posterior cervical region and forearm, with or without paresthesias such as numbness or tingling in the tips of the thumb and fingers; cases in which there are abnormal roentgenologic or neurologic findings in conjunction with root pain which resolves satisfactorily after conservative treatment; and finally, cases in which demonstrable protrusion of nuclear material from a disc occurs. It is to cases of these sorts that this paper is devoted.

ANATOMICAL CONSIDERATIONS

The bodies of the cervical vertebrae differ in certain respects from the others. Instead of being cylindrical in shape they are oblong, the transverse diameter being much longer than the anteroposterior. The pedicles or roots of the vertebral arches spring from the posterior half of the lateral aspects of the body, extend posteriorly and fuse with the laminae which converge posteriorly to enclose the vertebral canal. Binding together the laminae of the adjoining vertebrae are the ligamenta flava.

The vertebral canal is larger than in the thoracic or lumbar region, and is triangular or more nearly semilunar in outline. Where the pedicles and laminae join, cylindrical masses of bone project upward and downward to support the superior and inferior articular processes. The bone is so sliced away that the superior articular facets are directed upward and backward and the corresponding inferior surfaces are turned downward and forward. The apophyseal joints which are formed in this way are provided with complete but very thin-walled articular capsules lined with synovia. Corresponding to the freedom of movement of the neck, these capsules are thinnest and loosest in the cervical region.

Lying between the bodies of the vertebrae are the intervertebral fibrocartilages or discs. In the region between the third and seventh cervical vertebrae they are thinner than in any other portion of the spine. The superior and inferior surfaces of the discs are closely adherent to the epiphyseal plates of the adjoining vertebrae. The circumferential portion or annulus fibrosus, formed chiefly of parallel fibers running from one vertebra to the other, completely encloses the nucleus pulposus, which is composed of the remnant cells from the notocord and a semigelatinous matrix containing 75 to 90 per cent water.[1]

Each nerve root emerges from an intervertebral foramen which is bounded anteriorly by an intervertebral disc and by the bodies of the adjoining vertebrae, posteriorly by the capsules surrounding the intervertebral joints and above and below by the inferior and superior notched borders of the pedicles.

Read before a Joint Meeting of the Sections on Neuropsychiatry, Industrial Medicine and Surgery and Radiology at the 76th Annual Session of the California Medical Association, Los Angeles, April 30-May 3, 1947.

CLINICAL CONSIDERATIONS

Radicular pain arises from irritation of a sensory or posterior nerve root. The sensory root extends from the pia mater of the spinal cord to the outer aspect of the corresponding intervertebral canal, the spinal ganglion lying in the foramen. The roots of the nerves may be involved in the subarachnoid space or in the intervertebral canal. While both the motor and sensory roots are usually involved, sensory symptoms are more common and conspicuous, the constant feature being pain.[8] In turn, the swelling which often accompanies or follows compression of the nerve tends to aggravate and perpetuate the initial symptoms. It must be emphasized that the sensory fibers derived from a single posterior nerve root are not the exclusive source of innervation to any region, and that the sensory distribution of any given nerve root does not conform to that of any peripheral nerve since peripheral nerves are composed of fibers derived from two or more nerve roots.

From these data it is apparent that pathologic conditions of the body or pedicles of a vertebra, or the overlying periosteum, arthritic changes in an intervertebral articulation, rupture of an annulus fibrosus of an intervertebral disc, with or without extrusion of the nucleus pulposus, and disease of the ligaments may result in the development of syndromes characterized in great part by radicular pain.

CASE REPORT

Case 1. While playing golf, a 43-year-old man suddenly noted a pain in the upper part of the right interscapular area which became more pronounced the next day and was not relieved by osteopathic adjustment. The pain radiated down the lateral aspect of the right arm and forearm to a level a short distance above the wrist. It was an agonizing, constant, dull ache, worse in the evening, less bothersome while he was at work, and relieved by walking. Within a day or two after the onset of pain, numbness developed in the terminal phalanges of the second and third digits of the right hand.

On the fourth day of the illness there was restricted motion of the neck. The pain had begun to be aggravated by extension of the head and neck. Roentgenograms of the cervical portion of the spine revealed slight hypertrophic osteoarthritic changes anteriorly along the lower margin of the fifth cervical vertebral body. On the tenth day the patient was admitted to the hospital after physical therapy had not relieved his discomfort. On the eleventh day the pain was so severe that he repeatedly left the bed and paced the floor for relief.

A neurologic examination made the following day was negative. On the assumption that the underlying pathologic process involved the periosteum and the apophyseal joints and ligaments adjoining the right intervertebral foramen between the fifth and sixth cervical vertebrae, absolute rest in bed and traction were instituted. Fairly prompt relief followed.

CASE REPORT

Case 2. In November, 1943, a married woman 49 years of age began to suffer from "terrific pain" in the left shoulder that awakened her from sleep almost nightly for the ensuing three or four months. The pain, which was of aching character, radiated from the shoulder to the lower posterior cervical region, over the scapula and down the lateral aspect of the arm to the elbow, and later into the radial half of the forearm. Cold damp weather and especially motion of the joint aggravated the pain. About a month afterward numbness appeared in the distal phalanges of the second and third fingers. Toward the middle of February, 1944, the patient became unable to button her clothes in the back with her left hand.

The left arm was carried by the side. Moderate limitation of the shoulder, particularly in abduction and external rotation, was noted, with slight atrophy of the musculature of the left scapula and shoulder. There was point tenderness over the anterolateral aspect of the shoulder. The tendinous reflexes of the upper and lower limbs were elicited with some difficulty but were equal on the two sides. No impairment of common or deep sensation could be demonstrated. There was no limitation of motion of the neck nor tenderness over the cervical portion of the spine. Roentgenograms of the cervical spine and of the left shoulder were negative. Physical therapy, including heat, massage and passive movement, was initiated on February 25, 1944. At that time the patient began a program of daily exercises which has been continued to the present. Within a short time the pain began to diminish gradually in severity. The paresthesias left by degrees. By May 5, 1944, the pain had markedly diminished. Abduction of the left shoulder was possible to the extent of 75 degrees. Anteriorly the arm could be raised to 90 degrees. With difficulty the patient could reach the back of her neck and waist. After an operation for fistula in ano, in Septemher, 1944, the pain left. On December 5, 1944, there was still slight limitation of abduction and external rotation of the left shoulder. Roentgenograms of the cervical spine made in April, 1947, show hyperthrophic spurs of moderate size along the posterior borders of the bodies abutting on the fourth and fifth, and fifth and sixth intervertebral spaces. Roentgenograms of the shoulder are negative.

DISCUSSION

The first case is one of osteoarthritis of the cervical spine in which the symptoms of radicular pain and paresthesias are due to changes in the soft tissues contiguous to the right sixth cervical nerve root in the intervertebral foramen lying between the fifth and sixth cervical vertebrae. The second case is a fairly typical one of supraspinatous tendonitis of non-calcific type, or what was formerly described as subacromial or subdeltoid bursitis. It is an entity that usually begins in middle age, may come on acutely, generally with pain in the shoulder and limitation of motion, especially in abduction and external rotation. The pain may radiate into the arm and forearm and to the trapezius area. At times it may be associated with paresthesias of the fingers. On examination there is generally point tenderness over the insertion of the supraspinatous tendon. Almost invariably the pain is induced on attempted abduction or external rotation. Later, atrophy of the deltoid may give the shoulder an appearance of squareness. Calcium deposits in the tendon or bursa or both more frequently appear in cases of a recurring character. Sometimes they are observed during the first acute episode. In this instance the obvious pathologic change was in the shoulder, where three and one-half years after onset there is still limitation of motion.

Lesions limited strictly to the shoulder, however, rarely induce pain that radiates below the level of the elbow. Paresthesias in the fingers are not susceptible of explanation on the basis of a lesion of

the shoulder alone. The combination of radicular pain and paresthesias in the fingertips strongly suggests that a part of the syndrome arises from pressure of swollen tissues on a nerve root in an intervertebral foramen. It seems probable that transient swelling of the apophyseal joints, the periosteum and the adjacent ligaments may occur, roentgenographic evidence of which may not appear, as in this instance, for years afterward. The evolution of a typical Heberden's node appears to offer an analogous picture. Roentgenograms of the small red raised tender masses that are seen at the distal interphalangeal joints of a finger as the first manifestation of this type of trouble are negative. Later, when the acute inflammatory reaction has subsided, hypertrophic spurs or lipping may be demonstrated by x-ray. Cases of this sort have led to the assumption that in some instances the condition in the region of the shoulder is secondary to that of the spine, and possibly of trophic origin.[2]

CASE REPORT

CASE 3. A married woman 41 years of age, who had been in good health, was examined in the hospital December 30, 1938. In August she had begun to be awakened two or three times nightly by tingling in the tips of the fingers of the left hand, which "could be rubbed away." Two or three weeks later, on awakening during the night, she became aware of pain in the left suprascapular region which radiated to the left shoulder and arm. At first it would leave promptly when the patient arose and became active. Gradually it grew worse. By the end of ten days the pain was constant almost day and night and wakened her repeatedly. The tingling would recur during the day upon elevation of the left upper limb, as to comb the hair. At the end of a week the pain began to diminish. Several days later the patient was free from pain and the tingling had ceased to recur.

In mid-November, however, the tingling returned in the tips of the fingers and soon spread to the entire left hand. It awakened the patient two or three times each night. At the end of the week she was awakened three or four hours after retiring by pain "in the back of the left shoulder" which radiated to the left arm and shortly afterward to the radial half of the left forearm. A fortnight later she was admitted to the hospital with very severe constant pain, particularly in the morning on first waking up. The tingling in the left hand was present most of the time. Improvement followed several days of rest and exposure to a sun lamp and the patient returned home for the Christmas holidays. On December 27, the pain became more troublesome. "A severe burning wave-like distress" set in over the volar aspect of the left arm, forearm, wrist and palm. Coincidentally, numbness of the tips of the left thumb and the distal and middle phalanges of the left index and middle fingers developed. On examination the patient was found to be in great pain. Moderate weakness of the left triceps and absence of the left triceps reflex were noted. There was no cervical rigidity and no pain on snapping the head onto the chest. Percussion over the spine induced no discomfort. Roentgenograms revealed loss of the normal cervical lordotic curve below the fourth cervical vertebra, and a slight degree of hypertrophic osteoarthritis along the posterior margins of the bodies of the sixth and seventh cervical vertebrae.

The patient was placed at absolute rest in bed and given codeine for relief of pain. On January 5, 1939, tonsillar tags were removed. By January 13, analgesic medication no longer was needed and by January 29 the patient was free from pain. The numbness in the fingers of the left hand persisted in diminishing degree for 13 or 14 months. There has been no recurrence of symptoms.

DISCUSSION

In this instance it was decided that an examination of the cerebrospinal fluid and myelographic studies would be made if the patient did not show prompt improvement. When the pain diminished and left, further investigative studies were not made. While it is possible that this syndrome was due to hypertrophic osteoarthritis, in the light of subsequent knowledge, the weakness of the left triceps and the absence of the left triceps reflex, the obliteration of the normal cervical curve in the lateral roentgenograms of the cervical spine, and the recurring attacks of radicular pain with paresthesias in the fingers strongly suggest rupture of a cervical intervertebral disc. In particular, it should be emphasized that loss of a tendon reflex in cases of this type is indicative of an abnormal state of the disc rather than of the other soft tissues. The diagnosis must ultimately rest on myelography.[2]

Tumor of the cervical portion of the spinal cord, a much rarer clinical entity, may lead to the production of a similar syndrome. In that instance, however, protracted relief would not be expected from conservative measures. Ultimately, the steady relentless progression characteristic of neoplasms would lead to symptoms of compression of the spinal cord.

This case is an example which illustrates the wisdom of a conservative approach to cases of radicular pain even with muscular weakness, loss of reflexes and obliteration of the normal cervical lordotic curve. Scoville's statement[5] that less than ten per cent require surgical treatment seems entirely sound. Only when patients have intractable or recurring pain and only after conservative measures such as absolute rest in bed and traction have proved unsuccessful, is surgical treatment advisable.

CASE REPORT

CASE 4. A man 52 years of age complained of pain and weakness in the right arm and hand. Seventeen years before, his neck had been forcibly flexed in an automobile accident and for several weeks afterward he suffered from local stiffness and soreness. While playing tennis four years before he had suddenly developed pain in the lower posterior cervical region, with extension to the right arm. Though the pain fluctuated notably in severity, it was persistent despite treatment with heat, diathermy, massage, and traction from time to time. On two occasions, the first two years before the present examination, and the second a year before, he had had periods of weakness of the right arm with a moderate degree of wrist drop. The first episode cleared up after traction; the second was followed by atrophy of the musculature of the entire right upper limb which was most marked in the forearm. During the three months preceding examination he had suffered most of the time from pain in the neck, right arm and hand, that spread to the right scapular and pectoral regions. The pain was most intense in the ulnar portion of the forearm and the third, fourth and fifth fingers. Exercise of all sorts, motion of the neck, coughing and sneezing, and sleeping on the right side aggravated the pain.

Examination disclosed marked weakness of the extensors of the fourth and fifth digits of the right hand, moderately marked weakness of the extensors of the wrist, moderate weakness of the remaining musculature of the forearm, and a slight degree of weakness of the triceps. Atrophy of slight to moderate degree of the forearm was apparent. A slight loss of common sensation could be demonstrated over the ulnar half of the forearm and hand and over the fourth and fifth digits. The triceps reflex was diminished. Pressure on the head led to exaggeration of the pain in the right upper extremity.

Roentgenograms showed loss of the normal cervical lordotic curve with hypertrophic changes along the adjoining borders of the fifth and sixth, and sixth and seventh cervical vertebrae. The hydrodynamics of the cerebrospinal fluid were normal. The total protein content was 70 mg. per 100 cc. Myelographic studies revealed filling defects bilaterally opposite the intervertebral spaces between the fifth and sixth, and the sixth and seventh cervical vertebrae and absence of the nerve sleeve on the right side between the sixth and seventh cervical vertebrae.

At operation the neurosurgeon encountered and removed a hypertrophic spur beneath the sixth cervical nerve root and a protruded nucleus pulposus below the seventh. The operative procedure was followed by immediate relief from the radicular pain in the right upper limb. For ten days there was almost total paralysis of the fourth and fifth digits of the right hand. During the ensuing four days, however, rapid improvement of function took place. At the time of discharge on the 14th postoperative day there was only slight weakness of the musculature of the left arm, forearm, and hand. No change had occurred in the muscular atrophy.

DISCUSSION

The variations in the brachial plexus, which may be prefixed or postfixed, complicate the clinical interpretation of cases of this sort characterized by radicular pain. As a rule, however, weakness of the triceps or a diminished or absent triceps reflex may safely be ascribed to damage to the sixth cervical nerve root. In this instance, the wrist drop was apparently due to involvement of the seventh nerve root.

The alternating exacerbations and remissions of radicular pain and other symptoms and signs offer interesting matter for conjecture. It seems probable that as a result of injury some degree of protrusion of the nucleus pulposus occurs. Flexing or twisting the neck may later push the nuclear mass out, leading to compression of the adjacent nerve root with consequent swelling to the point where the nerve root is actually larger than the corresponding intervertebral foramen. If but one insult of this sort takes place the swelling of the nerve soon subsides and the symptoms disappear. If, however, the nerve is repeatedly injured by protruded material, or by irritation secondary to loss of fluid from the nucleus and consequent trauma to the adjoining structures, the nerve will continue to remain swollen and the symptoms will persist.[7] These postulations may constitute an explanation for the type of relief which frequently follows the use of traction. Obviously surgical treatment alone offers a satisfactory prognosis for cases of this nature and severity.

CONCLUSIONS

Radicular pain in the upper limb has the same general characteristics it exhibits elsewhere. It is limited to the area of distribution of a sensory nerve root, is generally aggravated by coughing and straining, and by reclining for long periods, and is frequently relieved by assuming the upright position. If severe or persistent it may be accompanied by muscular weakness with atrophy and fibrillations due to degeneration of the fibers of the corresponding motor root.

Examples of some of the more common types of syndromes in which radicular pain in the upper extremity is a predominating factor have been presented.

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REFERENCES

1. Barr, J. S. In discussion of Mixter, W. J., and Barr, J. S.: Rupture of the intervertebral disc with involvement of the spinal canal, New England J. Med., 211:214 (Aug. 2), 1934.

2. Boland, E. W.: Personal communication to the author.

3. Michelson, J. J., and Mixter, W. J.: Diagnostic aspects of unilateral ruptured cervical disc, Arch. of Neurol. and Psychiat., 56:721-724 (Dec.), 1946.

4. Mixter, W. J., and Barr, J. S.: Rupture of the intervertebral disc with involvement of the spinal canal, New England J. Med., 211:210-215 (Aug. 2), 1934.

5. Scoville, W. B. In discussion of Michelson, J. J. and Mixter, W. J.: Diagnostic aspects of unilateral ruptured cervical disc, Arch. of Neurol. and Psychiat., 56:722-723 (Dec.), 1946.

6. Semmes, R. E., and Murphey, F.: The syndrome of unilateral rupture of the sixth cervical intervertebral disc, J.A.M.A., 121:1209-1214 (April 10), 1943.

7. Shelden, C. H.: Personal communication to the author.

8. Yaskin, J. C.: Painful affections of the upper extremity and shoulder girdle. Neurologic considerations, Clinics, 4:275-293 (Aug.), 1945.

Degenerative Lesions of the Shoulder as a Cause of Pain

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PAINFUL degenerative lesions of the shoulder are ordinarily associated with advancing years. They include changes in the tendons, shoulder capsule and the joint cartilage. Terms such as tendinitis, bursitis, periarthritis, arthritis, and others, are given to these lesions. The symptoms are frequently initiated by trauma, even though minor. Degenerative changes are the major cause of prolonged disability beyond the second and third decades.

The shoulder joint is the most mobile in the body. It depends on its muscle and tendinous support for a large share of its stability. The rotator cuff and its spinatus tendons must travel a long way during resisted abduction of the arm, while they are under pressure between the head of the humerus and the acromion. The long head of the biceps is similarly situated medial to the greater tuberosity, extending medialward over the humeral head within the joint capsule to its insertion on the upper pole of the glenoid.

The classical description of the lesions of the shoulder joint which lead to pathological rupture, as well as to calcification of the rotator cuff as given by Codman[2] is clear and concise. The earliest gross changes which give evidence of degeneration are loss of the normal elasticity of this tissue. On microscopic examination, this change is evidenced by a hyalin degeneration in the collagens of the tendon fibers. This degeneration is followed by fibrillation or separation of the individual fibers which then become more easily vulnerable to the trauma of movement. If enough of these individual changes have occurred in the substance of a tendon, there may be various degrees of separation in local areas of these thickened, swollen, degenerated tendon fibers. As they have lost their normal elasticity, additional trauma may break them up into small pieces so that they eventually become what have been termed "rice bodies." These small accumulations of loose degenerated tendon fibers may undergo a process of healing, or gradually enlarge as other fibers are added to the original mass. Although the material in these cavities appears grossly at operation as an accumulation of pus, it is sterile on culture. If trauma is not sufficient to produce major ruptures of the tendon, this degenerative mass of material may become calcified. The mechanism for this change is not known. The degenerative process is usually reversed when a rupture or tear occurs in some overlying tendon fibers so that the material may be thrown out into more vascular tissue such as the subdeltoid or the subacromial bursa. Granulation tissue then invades the cavity in the healing process. When this material is thrown out into tissue which is more vascular, the normal foreign body reaction takes place. The inflammatory reaction around this area when it is small can quickly repair these tissues. If, however, a tear should occur, and a large amount of debris is thrown into the subdeltoid bursa, or if calcareous material is thrown out into the subdeltoid bursa, the inflammatory reaction which takes place will be acute. Early calcareous deposits are at times the seat of inflammation. Prior to rupture there may be marked pressure increase within the sac. This results in acute pain which will be aggravated by any type of treatment or pressure that increases deep engorgement or congestion.

The calcareous material, at first liquid and milky, gradually becomes dry and chalky in the chronic cases. The degenerated bands or strands are easily seen when the bursa is opened. When the dry, chalky material is curetted from the various small pockets, the edges are dry, rough and avascular, until the base and margins have been cut away. These margins have the gross appearance of fibrillated degenerated tendon. It may be necessary to cut through the cortical plate of the bone at the base to get free bleeding.

The joint cartilage changes are at first swelling and softening, and later fibrillating and thinning, especially in those shoulders that have soft tissue degeneration. The subchondral bony plate may become hard and sclerotic.

The degenerative changes previously enumerated are, in the author's opinion, primarily metabolic, with heredity an important determinant. Just as gray hair appears earlier in the offspring of certain parents, so degenerative tendencies also are transmitted. These tendencies may be manifest through a gradual slowing down of circulation to part of or all the body tissues with advancing years. Since tendons and joint cartilage are poorly nourished as compared with muscle, they are the first to undergo the changes which anoxia brings about.

Trauma plays an important part in many cases, in bringing on the acute changes, but it is not the sole cause, for even greater trauma in younger people produces only brief disability or none at all. If trauma were the major consideration, then why should we see more women than men disabled? And why are the slender, small boned, poorly muscled so frequently affected, even though they have been doing almost sedentary work? It is noteworthy that, in the author's experience, shoulder lesions in patients in this category have been the most resistant to treatment, and convalescence has been slower. Trauma may be caused by bacterial or other toxins which can sharply accelerate tissue senescence. Such traumata seem quite pronounced in what we choose to call rheumatoid arthritis.

Patients, usually over 30 years of age and most frequently 40 to 50, give a history of either a slowly progressive ache in the shoulder without trauma, or of a rather minor injury followed by a lull of eight to twenty hours of relative comfort before the acute symptoms begin. When the patient is acutely affected

Read before the sections on Neuropsychiatry, Radiology, and Industrial Medicine and Surgery at the 76th Annual Session of the California Medical Association in Los Angeles, April 30-May 3, 1947.

he has severe shoulder pain, with an elevation of temperature to 100 degrees or 101 degrees F., pain on any arm movement and severe tenderness on pressure over the greater tuberosity. The author has seen patients with a leukocyte count as high as 16,000, although this is not common. The pain apparently is especially annoying at night. The application of heat, diathermy, for example, intensifies the pain; cold relieves it. In about one to two weeks the pain begins to subside, and the patient may begin to move the arm a little. This relief occurs, even though the only treatment is the splinting imposed by nature. McLaughlin [3] states that in a large series studied, results among patients given no treatment except sedatives were strikingly similar to those obtained in patients who were given vigorous treatment. Calcifications need not cause pain, as Bosworth [1] found that 2.7 per cent of a series of 6,000 of so-called normals had calcifications without symptoms.

In the chronic cases the patients may have severely stiff shoulders for periods of from six months to four years. Pain is not proportional to the original injury or to the degree of stiffness. A very high percentage of patients will recover near-normal range of motion unless the joint has been damaged by vigorous manipulation or too strenuous physiotherapy.

No x-ray examination is complete that does not provide a two-view projection, one view setting the greater tuberosity in relief in either internal or external rotation, the other a view at 90 degree angle from this. The early changes are seen as a decalcification or pitting of the greater tuberosity. Later this same area may be the site of calcification. The early calcifications during the "milky stage" are seen as a hazy shadow. The dry, chalky deposits are seen as sharply outlined shadows. These are sometimes seen in the subscapularis tendon as well as in the supraspinatus insertion.

The author's choice of treatment during the very acute phase is, in the absence of calcification, the application of ice caps directly to the shoulder. These are applied for 20 minutes and then removed for 20 minutes, this alternation being continued the first 24 to 48 hours, when the acute symptoms usually have subsided. If fever is present, the use of penicillin and sulfa drugs for the same period accelerates the return to normal. Later the ice caps are alternated with hot water bags or an infra-red lamp. In those patients who have visible calcifications, surgical removal will give the quickest, long-term relief.

In both instances those movements which cause pain are strictly proscribed. When the patient can move the arm even a small amount without pain he is encouraged to move it actively, but within the painless range. The airplane splint is a great help both in aiding early exercise of the shoulder and in preventing the adducted frozen shoulder which is sometimes seen. It is most important that the exercise be active and that it be done as many times a day as possible, as long as it does not result in stiffening or excessive after pain.

The same active exercise program is prescribed in the subacute cases. Any measure which will promote local increase in circulation is indicated. Application of heat (especially before exercise), alternate hot and cold applications, local infiltrations of novocain as well as stellate ganglion blocks, and many measures are useful. Because of the long time periods involved in many cases, patients are sometimes overtreated. Massage, if given carefully, will do a great deal to alleviate muscle tenderness. The excessive use of deep heat, such as diathermy or x-ray therapy, in chronic cases probably prolongs rather than accelerates the recovery rate. The clinical course appears to be self-limited for each episode. The degree of change determines the time of recovery. A great deal of our emphasis is directed to decreasing secondary reaction and lessening the trauma of moving a swollen greater tuberosity under the acromion.

Although some patients in the higher age brackets should be urged to decrease their work or change the nature of it, ordinarily they should be permitted to perform as much of their work as they can as soon as they can. This helps keep up morale—which is important in the treatment—when the progress is slow. Assurance may be given that the prognosis is excellent so far as eventual use of the joint is concerned.

The immediate results in acute cases, whether operation or conservative therapy is used, are good. Even those patients who have had tears of the rotator cuff will be able, with the aid of local novocain blocks, to start an exercise program and to keep up a surprising amount of it after the effect of the drug has worn off.

If quick repair is expected, the results in chronic cases are discouraging. Stellate ganglion blocks give rather consistent relief of pain, but this relief is more lasting in the more acute cases. When the patient is of the slender, sthenic type, time alone often seems to bring healing, although it may be three to eighteen months before satisfactory function returns.

SUMMARY

1. The pathological changes in degenerative lesions of the shoulder have been reviewed.

2. These have been given as an explanation for the frequent chronic cases seen from minor injury.

3. Acute cases are treated preferably by cold rather than heat.

4. Exercise should always be *active* and within the painless range.

5. Overtreatment and manipulations are two of the causes of prolonged disability.

6. Novocain infiltrations locally, as well as stellate ganglion blocks, are valuable adjuncts to treatment.

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REFERENCES

1. Bosworth, Boardman March: Calcified deposits in the shoulder and subacromial bursitis; a survey of 12,122 shoulders, J.A.M.A., 116:2477 (May 31), 1941.

2. Codman, E. A.: The shoulder, 1934, pp. 65-122.

3. McLaughlin, Harrison L.: Calcific deposits in the shoulder, N. Y. State J. of Med., 44:2231-2235 (Oct. 15), 1944.

Psychosomatic Considerations in Gastroenterology

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THE abdomen has been aptly called "the sounding board of the emotions." All of us have known the student who before examinations may develop loss of appetite, nausea or diarrhea, or the businessman who may experience indigestion, heartburn and actual abdominal pain at the time of important conferences or in connection with financial reverses. Emotional stimuli are known by all of us to produce disturbance of the gastro-intestinal tract affecting appetite, digestion, and function of the colon. When these emotional disturbances and their effects become chronic, we designate them as gastro-intestinal neuroses.

As Weiss and English have pointed out in their classic studies on psychosomatic medicine, the theory of psychogenic disorders has now received widespread recognition. Our daily language is filled with phrases which refer to the relationship between the personality and gastro-intestinal tract. Thus we speak of a "sucker" as the man who "bites" on something and is fooled; we designate certain persons as "leeches" because of their propensities to hang on. We speak of a person "sinking his teeth" into a job; of "guts" and "intestinal fortitude," or of not being able "to stomach" something. Everyone is familiar with the expressions "a bellyful" and "biting off more than one can chew." There are a great many vulgar words and phrases for feces which are used colloquially to indicate depreciation or disparagement or hatred. In all this organ-jargon or "language of the organs," the layman acknowledges a direct relationship, even though by intuition and unconsciously, of the importance of the gastro-intestinal tract to the development of the personality. Among physicians there are three attitudes toward this relationship. In one group are the "die-hards" who believe that chronic gastro-intestinal disease brings about the changes in personality. Others acknowledge psychogenic causes of the "functional" disturbances of the digestive tract, but employ vague terms to describe the psychological factors, such as "emotional disorders" or "worries," and adopt the attitude that these obviously explain the illness and its treatment. A third group has the progressive approach that the personalities of patients with these disorders should be studied and the treatment gauged accordingly.

W. C. Menninger has pointed out that if for no other reason than the length of the gastro-intestinal tract, its functional disorders probably constitute the largest single group of cases in medicine in which organ dysfunction is present. Next to the skin, more of the digestive tract is in contact with the outside world than any organ. It is subject to more direct demands for adjustment and accommodation, more insults and abuses and a greater variety of opportunities for gratification, than any other organ or system suffers or enjoys. Many of our patients in gastroenterologic practice because of a gastro-intestinal problem fall into the so-called "functional" group, where no organic disease of the digestive tract can be demonstrated following complete examinations, and x-ray and laboratory studies.

We are all conscious of the increasing recognition by clinicians that a "functional" difficulty in the gastro-intestinal tract is the expression of a disorder in the personality. While many physicians pay lip-service to this concept in theory, there are still many who do not apply this in practice. As Crookshank has so aptly said, physicians often continue to refuse to seek the psychological implications in a case of "mucous colitis." It would be as though a clinician, confronted by a patient with uncontrollable emotional weeping, were to describe the case as one of "paroxysmal weeping" and treat the patient with belladonna, sedatives, local applications, and advice to avoid sexual excess, tea, tobacco, and alcohol, with prescription of a salt-free diet and restriction of fluid intake, then, in the event of failure, removal of the tear glands would be recommended. Of course this sounds ridiculous, but a good deal of medicine and surgery seems to be on much the same level.

SECURITY AND NOURISHMENT RELATED

It is easy to see how the abdomen can act as the sounding board of the emotions, because it is so thoroughly supplied by the autonomic nervous system including both the sympathetic and parasympathetic nerve fibers—the direct lines of communication between the brain centers and the abdominal organs. In addition the behavior patterns of the gastro-intestinal tract acquired during infancy are relayed to the brain and stored there in that reservoir of memory, the unconscious mind. If the proper stimulus is present, without the conscious awareness of the patient, impulses can be sent out from the unconscious mind through the autonomic nervous system, thereby bringing back once again the old infantile behavior pattern. Security and nourishment are inextricably connected in the unconscious mind because of the instinctual need for survival in infantile life. Should the patient's security be endangered later in his life, the organ which controls nourishment can be disturbed from its normal function. The following examples, culled from personal clinical investigation, demonstrate how emotional influences are mediated from the brain centers through the autonomic nervous system, resulting in profound changes in the digestive tract.

1. The effects of hypnosis on gastro-intestinal secretion were studied in a medical student by the author in 1935. The patient was hypnotized, and before hypnosis a gastric tube was passed. Through suggestion the student was made to believe he was

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Presented before the Western Society for Psychosomatic Medicine, Nov. 2, 1947.

masticating a delicious steak. The gastric secretions were continually aspirated and it was found that the pepsin and hydrochloric acid content rose immediately to a high level. Then suggestion was employed to introduce the idea that the meat was badly spoiled and that it was disgusting to taste. Immediately the volume of gastric secretion, gastric acidity and pepsin content was reduced.

2. During gastroscopies, the author often has had occasion to corroborate the studies that William Beaumont made over 100 years ago in Alexis St. Martin. It will be recalled that St. Martin had a gun-shot wound of the abdomen which laid open a gastric fistula. By this means Beaumont was able to look directly into the stomach and observe that when St. Martin was angry or depressed, the mucosa of the stomach could become red and dry, and at other times become pale and moist, and the secretions would fluctuate correspondingly. These changes were also shown later by Wolf and Wolf in their subject, "Tom."

3. Over ten years ago the author and an associate were struck by the number of patients who had been unnecessarily operated upon for so-called "chronic appendicitis." In our published report [5] at that time these patients were demonstrated to have the "spastic or irritable" colon syndrome, i.e., a gastro-intestinal functional disease. The pathologist would regularly report "normal appendix" on the surgical specimens of these cases sent to the laboratory. After a more careful history and examination, the disease in these patients was found to be of psychogenic origin. The accompanying tables show how, with more time directed to the personality and emotional factors, unnecessary operations and suffering could have been avoided. These patients pre- and postoperatively complained of atypical abdominal pains; in 33 per cent the symptoms involved the right lower quadrant; accompanying symptoms were gassy distress, disturbances in bowel function, pyrosis, flatulence and nervousness.

In Table 1, it is notable that patients with the spastic colon syndrome complained of "nervousness" in only 24 per cent of the cases. It is therefore incumbent upon the physician to bring out the psychogenic factors in order to solve the problem of this psychosomatic illness presented by the patient.

TABLE 1.—*Frequency of Neurosis Symptoms in Patients with Irritable Colon*

Symptoms	No. of Patients	Percentage
Constipation including alternation with diarrhea	28	82
Constipation alone	24	71
Generalized abdominal distress or pain	23	68
Presence of "gas" and belching	17	50
Nausea with or without vomiting	15	44
Pains in lower right quadrant	11	33
Nervousness	8	24
Constipation alternating with diarrhea	8	24
Fatigue, lassitude or exhaustion	7	21
Diarrhea alone	3	12

Table 2 demonstrates the value of eliciting the direct, causal relationship of emotional tension to the physical signs and symptoms. In 88 per cent of the cases reviewed, this relationship was discovered by careful questioning.

TABLE 2.—*Most Valuable Differential Diagnostic Signs or Symptoms*

Symptoms or Signs	No. of Patients	Percentage
Cases noting precipitation or aggravation of symptoms by emotional tension	30	88
Cases noting spastic (or diarrheal) types of stools	26	87
Unstable autonomic nervous systems	29	85
Poor living and hygienic habits	27	80
Personality disturbance	27	80
Gross mucus in stools	24	71

Table 3 demonstrates that in the average individual three symptom-free years can be ascribed to the psychological effects of operation in this series of patients, although some patients had a return of symptoms within a month or two after operation.

TABLE 3.—*Duration of Symptoms in Patients with Irritable Colon Before and After Appendix*

	Average No. of Years	Range in Years
Before operation	6.6	1/4-27
Time elapsed between operation and recurrence of symptom	3.	1/12-20

Table 4 describes the good results of treatment in a group of patients who were completely cooperative and willing to undergo treatment jointly with the gastroenterologist and the psychiatrist in either hospital clinic or private practice.

TABLE 4.—*Results of Treatment*

Condition	No. of Patients	Percentage
Considerable improvement (including symptomatic cures) within 3 months	24	67
Same as end of one year	3	18
Failure of therapy	2	15

4. During investigations into diseases of the pancreas, the author conducted a series of studies by duodenal enzyme tests in a group of patients who were referred to our gastro-intestinal clinic, suffering from so-called "nervous indigestion." These patients, whom we referred to the psychiatric clinic for appraisal, were found to be suffering from varieties of anxiety neurosis, anxiety hysteria, conversion hysteria and neurasthenia. Table 5 shows the averages of duodenal enzyme tests in this group of patients compared with results of the tests in a group of normal students and internes and also a group of patients suffering from organic diseases of the pancreas, biliary tract and stomach, such as carcinoma of the pancreas and cirrhosis of the liver and pancreas. It is noted that in the group of patients with functional disturbance there was a definite impairment of secretion of the pancreatic enzymes pro-

TABLE 5. — *Duodenal Content Analyses for Pancreatic Enzymes; Total Average of Four Enzyme Readings in Comparative Studies of Upper Gastrointestinal Tract Diseases.*

Enzyme	Normal Control Subjects	Functional or Nonorganic Diseases	Organic Diseases
Proteinase*	3.6	2.0	1.3
Minimum variation	0.6	0.2	0
Maximum variation	7.4	3.8	5.6
Amylase†	7.5	4.3	3.7
Minimum variation	0	0.6	0
Maximum variation	17.3	8.5	10.4
Lipase‡	8.0	4.0	3.6
Minimum variation	0	0	0
Maximum variation	31.4	8.5	13.6

* Milligrams tyrosine equivalent.
† Milligrams glucose equivalent.
‡ Milliliters 0.05 N sodium hydroxide equivalent.

teinase, amylase and lipase. This impairment is intermediary between the group average for the normals and that of the group having organic disease. This sub-normal pancreatic secretion in gastro-intestinal neurosis has a significant biochemical and physiologic bearing on the cause for the "nervous indigestion" in these patients. This latter lay term is actually correct in that a measureable and substantial deficiency in digestive ferments occurs in emotional derangement which aids in causing the well known symptoms.

Anxiety is the central symptom of nearly all the neuroses and psychoneuroses, and its recognition is of fundamental importance in the management of all gastro-intestinal neuroses. Unfortunately, many physicians are either constitutionally unfit to manage neurotics, or do not have the time nor understanding required to treat the illness.

Anxiety hysteria is certainly one of the most frequently seen psychoneuroses in the daily practice of gastroenterology. In anxiety hysteria the manifestations are aerophagia, pyrosis, globus, esophagospasm, cardiospasm, pylorospasm, duodenal spasm, the spastic irritable colon syndrome, diarrheas, and constipation. Apprehension is a constant finding in all these manifestations.

As to the psychopathology of the gastro-intestinal neuroses which are present in the bulk of patients in gastroenterologic practice, the neurotic reactions include anxiety neurosis, conversion hysteria, anxiety hysteria, neurasthenia, and compulsive-obsessive neuroses.

Because nothing is more dramatic in medicine than sudden, visible hemorrhage, the experiences of two patients with ulcer will be described as examples of the effects of acute anxiety.

A young patient vomited so large a quantity of blood while on his honeymoon that a transfusion was necessary. This young man had had a previous hemorrhage from a duodenal ulcer in 1939 while his fiancee was making up her mind as to whether to marry him. The second hemorrhage occurred on his wedding night in bed in 1940. A third took place shortly after the patient received his draft notice in 1941, and a fourth occurred in 1942 when, because of the war, he had to close up his non-essential business. This certainly is an excellent demonstration of the effects of acute anxiety in the individual who has a peptic ulcer.

A distinguished clinical investigator in the East on two occasions was offered the profcssorship of medicine in two outstanding universities. Each time, after two or three days of deliberation, he suddenly collapsed from profuse tarry bowel movements due to severe hemorrhage from duodenal ulcer, although there had not been any apparent signs or symptoms of peptic ulcer preceding the hemorrhage. It is doubtful that a better example of the effects of acute anxiety could be found.

Weiss and English [6] have helped their patients to understand the symptoms by explaining the symbolism of these symptoms. If the patient cannot find an outlet for emotional tension by actions or words, the body will find some way of expressing this tension in a kind of organ language. As an example, if a patient has difficulty in swallowing (as in globus), and there is no organic disease present, it may mean that there is something in the life situation of the patient that he cannot swallow. Similarly, nausea with no organic cause may mean that the patient cannot stomach some environmental situation. In anorexia nervosa, with loss of weight and malnutrition, the patient may be emotionally as well as physically starved.

It may be of value to mention some of the emotional disorders occurring in the personality of patients with two prevalent gastro-intestinal diseases.

1. Peptic ulcer: This disease tends to occur not so much in persons of a certain personality type as in a typical conflict situation which can develop in various kinds of personalities. This characteristic conflict is between the desire to remain in the dependent situation of infancy or childhood, to be loved and cared for, and the opposing emotional drive in the pride and aspiration of an adult ego for independence, achievement, and self-sufficiency. Thus, many patients who have peptic ulcer show in their apparent behavior the aggressive, ambitious, independent attitude in an exaggerated way. Peptic ulcer is often seen among successful business men.

2. Colitis: This disease, which includes the non-specific varieties, was found in studies conducted at Harvard to be the somatic response to a type of nervous tension in 96 per cent of the cases. This involved anxiety (82 per cent), resentment (92 per cent), and guilt (67 per cent). Associated depressive, neurasthenic and hypochondriacal features are often present, but no one personality disorder is characteristic. However, a rigid type of thinking, such as in obsessive-compulsive states, is present in half the cases. The stigmata of instability of the autonomic nervous system are usually present.

Although this presentation has emphasized psychological considerations in gastroenterology, it is well to remember that the shoe may fit on the other foot as well. As many another clinician has observed, a patient with a psychoneurosis may develop an

organic lesion, such as cancer, which may escape attention because the attending physician, in evaluating the symptoms, may be biased by knowledge of the neurotic personality of the patient. It should therefore always be borne in mind that before a diagnosis of gastrointestinal neurosis is arrived at, every possibility of organic diseases such as cancer and gallstones should be ruled out by the proper examinations.

SUMMARY

1. The relationship of personality disorders to gastro-intestinal diseases is outlined.

2. The symbolism of organ language in digestive tract diseases is described.

3. Analysis of patients with the spastic "colitis" or spastic colon syndrome is presented from the psychosomatic aspects.

4. Biochemical and physiological studies are demonstrated in so-called "nervous indigestion," showing the biologic changes occurring in various psychosomatic disturbances affecting the gastro-intestinal tract.

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REFERENCES

1. Alexander, F., in diseases of the digestive system, edited by Portis, S. A., Lea and Febiger, p. 827, 1944.

2. Bockus, H. L.: Gastroenterology. See Yaskin, J. C.: Functional disorders of the gastro-intestinal tract of neuropsychiatric origin, 3:908, 1946.

3. Crookshank, F. G.: Organ-Jargon, British J. Med. Psychology, 10:295 (Jan.), 1931.

4. Menninger, W. C.: Functional disorders of the gastrointestinal tract, Am. J. Digest Dis. & Nutrition, 4:448 (Sept.), 1937.

5. Swalm, W. A., and Morrison, L. M.: A plea for conservatism in appendectomy for chronic appendicitis; observations on the spastic, irritable colon syndrome, Pennsylvania M. J., 41:988 (Aug.), 1938.

6. Weiss, E., and English, O. S.: Psychosomatic medicine, W. B. Saunders Co., 1943.

7. White, B. V., and Jones, C. M.: Mucous colitis, Ann. Int. Med., 14:854 (Nov.), 1940.

Breast Cancer in Mice

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ONE of the earliest published descriptions of a mammary tumor in a mouse was made by Crisp in 1854. Scattered descriptions of a few tumors appeared in the literature between 1891 and 1906 in connection with experiments being carried on during that period in transplantation of tumors. Apolant, in 1906 made a noteworthy contribution in his exhaustive and accurate description, classification, and consideration of pathogenesis, based on the study of 276 tumors. Additional studies by Borrel, Michaelis, J. A. Murray, Haaland, and others permitted the conclusion that these tumors are malignant epithelial new growths of the mouse.

Mammary tumors in mice originate multicentrically from the cells of the mammary epithelium. The tumors may arise from any portion of the mammary tissue, which in the mouse extends over the whole subcutaneous area from behind the ears to the base of the tail except for small midline ventral and dorsal strips. The subcutaneous tumors grow progressively, and spontaneous regression is rare although by no means unknown.

Microscopically, numerous morphologic variations between different tumors and different areas of the same tumor are encountered. Although in the majority an adenomatous pattern revealing its relation to or derivation from glandular structure is evident, arrangement may be in compact masses; and papillary, cystic, and hemorrhagic areas also are frequent. More rarely, keratinizing and molluscoid forms may be seen, and a few tumors contain neoplastic connective tissue elements as well, forming carcinosarcomas. Despite these variations, however, the tumors form a pathologic entity, and for most purposes the term "mammary tumor" is adequate.

The mammary tumors invade and infiltrate contiguous tissue, metastasize to the lungs and other sites, and recur after incomplete removal. The neoplasms can be transplanted into mice of the same genetic constitution, and some grow heterologously in the anterior chamber of the eye of rabbits or guinea pigs. The tumors grow in tissue culture and can be cultivated in the yolk sac of the embryonic chick.

On the whole, the biochemical constituents of mammary tumors are very similar to those of other mouse tumors. There is an accumulation of lactic acid, a lower pH, and a higher rate of anaerobic glycolysis than in most normal tissues. The vitamin concentration is near the upper level seen in other tumors, and the pattern of enzymes is similar to that in other mouse tumors. The values for the esterase of

The reader is referred to "A Symposium on Mammary Tumors in Mice," by members of the Staff of the National Cancer Institute, Am. Assn. Advancement Sc. Publ. 22, 1945, and to Shimkin, M. B., Experimental Induction of Mammary Cancer, Surgery 19:1-24 (Jan.), 1946, for fuller treatment and bibliography on the subject.

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Presented before the section on Pathology and Bacteriology at the 76th Annual Session of the California Medical Association in Los Angeles, April 30-May 3, 1947.

the blood serum, the catalase activity of the liver and kidney, and the hemoglobin of the blood are lowered with growing tumors.

Soon after the inception of cancer research on mice, it was noted that tumors appeared more often within certain cages of the colonies than within others. The immediate response to the observations of this selective occurrence of tumors was the suggestion of an infectious origin, particularly stressed by Borrel. In opposition to this theory, Loeb's studies suggested that hereditary factors were involved, and this concept was strengthened by the experiments of several investigators. J. A. Murray's paper of 1911 presented convincing evidence that female mice in whose immediate ancestry cancer of the breast occurred, were distinctly more liable to develop the disease than mice in whose ancestry tumors were more remote. The experiments of Lathrop and Loeb and of Slye further demonstrated that hereditary factors influenced the formation of tumors. As early as 1909, Little foresaw that homozygous strains were essential for an adequate analysis of characters as complicated as tumors. Experiments with homozygous strains of mice with incidences of mammary tumors ranging from less than 1 to over 90 per cent, developed by Little, Strong, and other geneticists, did not allow postulations of any simple genetic transmission of mammary or other tumors and also showed that degrees of susceptibility to different types of tumors are inherited as separate characters.

It is now established that susceptibility to mammary tumors is not a character with an all-or-none expression but is expressed in degree. Genetic factors influencing susceptibility are multiple. There is a relationship between mammary tumor development and a known, inherited, single-factor, coat-color trait —lethal yellow.

THE ROLE OF HORMONES

The experimental demonstration of the influence of ovarian hormones on the development of mammary tumors in mice was begun in 1913 by the work of Loeb and his associates. It was found that mammary tumors occurred more frequently in breeding than in non-breeding mice. Loeb further demonstrated that the incidence of tumors can be radically reduced by ovariectomy, and that the incidence is related to the age of the animal at the time of ovariectomy. Cori and W. S. Murray substantiated these findings, and the latter succeeded in obtaining mammary tumors in castrated male mice bearing ovarian grafts.

With the advent of chemically isolated estrogens, Lacassagne in 1932 reported the appearance of mammary tumors in male mice injected with these compounds. Most important was the fact that estrogens would elicit mammary tumors in males of strains in which females developed such tumors spontaneously, and in approximately the same incidence. Males of strains in which the tumor incidence was extremely low did not develop mammary cancer despite strenuous treatment with estrogens.

Development of mammary carcinomas has been elicited in male mice of susceptible strains with all the natural and synthetic estrogenic compounds that have been studied. The list includes estrone, estradiol, estriol, equilin, equilenin and their benzoates, diethylstilbestrol and its dipropionate, and triphenylethylene. In general, the carcinogenic activity tended to be related to the amount of estrogen in physiologic units rather than to chemical configuration or other properties. The chemicals could be administered subcutaneously, percutaneously, or orally with the same results, depending on the physiologic activity by the particular route. However, they had to be administered for some length of time, eight weeks or longer, for tumors to appear at a subsequent date. With the compounds in oily or aqueous media, having short periods of activity due to rapid elimination, relatively heavy doses were required to elicit the carcinogenic reaction. When the compounds were given in the form of subcutaneously implanted pellets, allowing steady and constant absorption, it was found that the dose of estrogen needed for the induction of mammary tumors was not above that physiologically elaborated by untreated female mice.

These experiments also permitted a thorough microscopic study of the changes in the breast leading to neoplasia.

In the male or the ovariectomized immature female with an intact pituitary, the mammary gland is a rudimentary structure of a few stunted ducts. The ducts begin to proliferate and to dilate within a few days after the administration of estrogens. They soon form buds, and the cells of the proliferating epithelium are large, with clear cytoplasm and vesicular nuclei. In some ducts, the cells become arranged in several layers and secrete an acidophilic product in the form of intracellular and extracellular droplets. The process progresses to the formation of small acinous lobules, so that the rudimentary breast becomes as well developed as that in the normal female. With excessive doses of estrogen, however, the glands become stunted and have localized areas of extensive alveolar development. If estrogen is discontinued at this point, the mammary hyperplasia undergoes gradual regression. With continued estrogenation, there is progressive hyperplasia of the alveoli and ducts; dilation of the ducts, round-cell infiltration, and increase in periductal fibrous tissue are observed inconstantly. In mice of strains in which adenocarcinoma does not develop, the process does not progress beyond this hyperplasia. In mice that develop cancer, there is a multicentric formation of adenomatous nodules which often coalesce, and adenocarcinoma develops in these centers. Microscopic examination does not reveal any sudden alteration which may be designated as the point at which the normal cells become neoplastic. The site, the growth, and the histologic appearance of mammary tumors elicited in mice injected with estrogens correspond in all details to the description of the spontaneous adenocarcinomas in female mice.

Numerous investigations have been performed in an attempt to discover differences in the morphology or physiology of the breast in mice belonging to

strains with different incidences of mammary carcinoma. No clear differences in morphology have been established. In general, however, hyperplasia of the ducts and alveoli under the stimulation of estrogens tends to be more rapid and more uneven, with the eventual development of adenomatous nodules, in the high-mammary-tumor strains. Distention of the ducts into cysts, round-cell infiltration, and an increase in periductal fibrous tissue are inconsistent features apparently not associated with the eventual development of mammary neoplasia.

The morphologic studies also stress that the essential difference between male and female mice, as far as the appearance of mammary carcinoma is concerned, is the practical absence of the mammary gland in the male animals. The formation of the gland and the increase in cellular elements under the stimulation of estrogens thus exteriorize or make possible the development of some factor already present in the animal that leads to the eventual appearance of gross mammary tumors. It is also clear that something more than excess growth is operating in the cancerous transformation of the breast. The onset of recognizable malignant nodules occurs in breeding females or in mice injected previously with estrogens when the major part of the mammary gland is involuting. A difference between the normal growth process and the neoplastic process is also indicated by the unsuccessful attempts to produce a direct transition of the fully developed mammary gland of pregnancy or lactation into a carcinomatous gland by continued injections of large doses of estrogen.

Studies aimed at demonstrating the essential difference between strains of mice that are susceptible to mammary carcinogenesis and those that are not, either spontaneously or under the influence of exogenously supplied estrogens, also took other lines. The estrus cycle of mice of different strains was compared: no correlation was found between the length or regularity of the sexual cycle, duration of keratinization of vaginal mucosa, and the occurrence of tumors. The susceptibility of mice to estrogens, as manifested by the dose required to produce estrus in spayed mice, was not correlated with the susceptibility to formation of tumors. The urinary excretion of estrogens and 17-ketosteroids and the ability of the liver to destroy estradiol in vitro do not differ significantly in the low- and the high-mammary-tumor strains. Nor could correlation be established with degenerative changes in the adrenals, the pituitary, or other endocrine organs.

Although the estrogens maintained their focal point in the genesis of mammary tumors in mice, it was shown that other endocrine secretions, especially those of the adrenal cortex and the anterior pituitary, were involved. Androgens, given over protracted periods of time, reduce the incidence of such tumors. The action is probably analogous to castration, since androgens suppress the estrus cycle and prevent follicular maturation. The adrenal cortex, in relation to sexual functions, can be considered as a potentially bisexual accessory gland capable of secreting either estrogens or androgens under the influence of stimuli from the pituitary gland. Woolley demonstrated that gonadectomy of young mice of two high-tumor strains led to progressive hyperplasia of the adrenal cortex. There was gradual recovery of the uterus, vagina, and breast from the castrate state, and mammary tumors developed in the females. In strains that do not develop mammary tumors spontaneously, no mammary tumors were obtained. Mammary carcinogenesis following gonadectomy is probably best explained by the extragenital production of estrogens in the hyperplastic adrenocortical tissue and is dependent upon whether the normal females of the strains develop tumors of the breast. The origin of estrogens in the adrenals was supported by the close morphologic similarity of the cells of the adrenal nodules to lutein-like cells of the ovary.

Subcutaneous graft of the hypophysis raises the incidence of mammary tumors in intact females but does not elicit them in males or ovariectomized females. Thus, the pituitary probably stimulates secretion from the ovary; it does not increase the incidence of tumors in strains of mice that do not develop such tumors spontaneously.

THE EXTRACHROMOSOMAL FACTOR

Between 1930 and 1933 the members of the staff of the Roscoe B. Jackson Memorial Laboratory conducted a number of reciprocal hybridization experiments with the high- and low-tumor strains that they had by that time perfected. The results of these experiments, along with those of Korteweg, led to the discovery of the extrachromosomal factor in mammary-tumor development and opened the door to one of the most fruitful lines of cancer research of the past decade. The discovery was that the hybrid female offspring resulting from the mating of high-tumor-strain females to low-tumor-strain males developed tumors in approximately the same incidence as the female of the high-tumor strain; but when the reciprocal cross was made, that is, low-tumor-strain females were mated with high-tumor-strain males, the tumor incidence of the female offspring was but little greater than in the female of the low-tumor strain.

Since the genetic constitution, including the sex chromosomes, was the same for the two groups of females resulting from reciprocal crosses between two isogenic lines, it was obvious that this effect was not transmitted through the chromosomes. It had to be some extrachromosomal factor which the female was capable of transmitting to her offspring. It appeared that this factor was probably transmitted by one of three possible routes: through the cytoplasm of the egg, through the placenta, or through the milk or other contact with the mother after birth.

Bittner undertook the study of the third possibility, and it was through his work that the factor was primarily revealed. Almost astonishing in its simplicity, the transfer of mice of high-mammary-tumor strains shortly after their birth to foster mothers of low-mammary-tumor strains reduced the occurrence of neoplasms. The low incidence was maintained in subsequent generations; in two strains with a previous

incidence of 80 per cent, animals of the tenth to the twentieth generation after a single interruption of the ingestion of milk from their mothers of high-cancer strain had an incidence of less than 2 per cent. When complete interruption of the milk ingestion could be assured, as by removal of the young from the uterus, even a lower residual rate of tumors was encountered. The basic observation has now been repeated and substantiated in one dozen or more independent laboratories throughout the world.

When low-tumor strains of mice are suckled by foster mothers of high-mammary-tumor strains, there is an increase in the incidence of mammary tumors. Whether this increased incidence is maintained or not depends on the genetic susceptibility of the strain. Strain C mice, possessing this genetic susceptibility, and having less than 2 per cent incidence of mammary tumors, were transformed, after nursing on high-mammary-tumor strain foster mothers, into a line having an incidence of over 80 per cent of tumors in subsequent generations. In contrast, in mice of strain C57 black, having a high genetic resistance to mammary tumors and the milk agent, the incidence may be increased to as high as 75 per cent by foster nursing them on animals possessing the milk agent, yet in subsequent generations the incidence rapidly decreases as the genetic resistance overcomes the milk influence.

It was also established that the induction of mammary tumors in male mice injected with estrogens was also dependent upon whether such animals possessed or did not possess the milk influence. Thus, hormonal stimulation of the breast is ineffective in mice not having the agent carried by milk.

Despite the lack of an adequate, rapid bio-assay technique, so that 12 months or longer is required for any particular determination, and despite the lack of stable preparations of the milk agent, depriving the experimenter of a standard sample of reference, much has been learned concerning the nature and properties of the milk agent.

It is known that the agent is present in the milk of high-mammary-tumor strains throughout the period of lactation, although it may vary in concentration during the reproducive period of the mouse. When the young of a high-tumor strain remain with their mothers for varying periods before being foster nursed by resistant-strain females, the young remaining with their mothers for shorter periods develop fewer tumors and at a later average age than do the young permitted to nurse from their mothers for longer periods. Other work, in which measured amounts of milk for high-tumor-strain females were fed to susceptible young by means of stomach tube, confirmed this dose-response relationship. A single oral administration of 0.1 cc. of high-tumor-strain milk to susceptible young mice produced mammary tumors in over 90 per cent of the animals, some eight months later. Evidently there occurs an event in the first few hours of life which leads to the appearance of mammary cancer months later.

The incidence of tumors later is higher in animals given the milk agent intraperitoneally than in those to which it is given orally. In all experiments with the agent, mammary tumors do not appear with any greater frequency at, or near, the site of injection than in other mammary glands of the animals.

The agent is widely distributed throughout the body of the mouse. Tumors have been produced in susceptible mice following subcutaneous injection of pieces of spleen, lactating mammary gland, and whole blood. Extracts of mammary tumors fed to susceptible mice evoke tumors, a finding demonstrating the presence of the agent in the tumor tissue. The agent does not seem to penetrate through the placenta. Despite its wide distribution throughout the body, the milk agent is apparently not contagious through body contact. Adult mice are more resistant to the milk agent than are those up to six weeks of age. There are pronounced differences in degrees of genetic susceptibility of different strains of mice to the milk agent, and the ability of such strains to transmit the agent.

Material obtained from lactating mammary tissue of high-tumor-strain mice by filtration through Seitz filters is capable of giving rise to mammary tumors in other mice. Desiccation of lactating mammary gland tissue at room temperature resulted in great loss of activity within one week. Extracts of mammary-tumor tissue to which 50 per cent glycerin was added at 8 degrees C. retained activity for nine days, but were inactive 80 days after the procedure. Lyophilized mammary-tumor tissue suspended in water and fed to mice produced tumors. The preparation was still active when tested six months after lyophilization, although the comparative potency with the original material was not determined, but it was inactive one year following the procedure. The agent survived in mammary tumors propagated in the yolk sac of chicken eggs.

The agent is destroyed in mouse milk and mammary tumor extracts heated to 60 degrees C. for 30 minutes. It survives in mouse milk kept at 8 degrees C. for 14 days, is active in extracts of mammary tumors at pH 5.5 to 10.2, but is inactive at pH 4.5. It is not inactivated by acetone or petroleum ether.

ULTRACENTRIFUGATION EXPERIMENTS

Ultracentrifugation experiments showed that the agent when obtained from lactating mammary glands and suspended in distilled water was sedimented at 110,000 times gravity for one hour. Extension of the ultracentrifuge studies revealed that there were two principal components for the active tumor extract. A minimum molecular weight of three to four million was estimated for the macromolecular component, while the faster moving component had a molecular weight of at least five million. The variations of sedimentation rate with concentration indicated an asymmetric particle.

Ultraviolet absorption spectrograms and other tests indicated the presence of a ribose-nucleic acid complex in the material from mammary tumors containing the agent. However, since similar components were present in normal tissues, it is not clear whether

the agent inciting mammary tumors in mice is an altered ribose-nucleic acid complex or whether this complex is merely the carrier of the active agent associated with it.

Rabbit serum obtained following injections of saline extract of mammary tumor or with ultracentrifuge pellet material neutralized fresh mouse mammary tumor extracts in vitro. Intraperitoneal injections of immune rabbit sera protected susceptible mice against the development of mammary tumors following the feeding of active fresh tumor extract. Recently Shabad announced that the milk agent can be detected by a complement fixation reaction.

Filtration and ultracentrifugation experiments show that the milk agent can be transmitted by cell-free material, and its transmission through many generations of mice implies propagation. These features suggest the action of an agent belonging to or related to the viruses. It is similar to known tumor viruses in its specificity for a certain tissue. It is apparently not involved in the genesis of spontaneous pulmonary or hepatic tumors, or of induced tumors of the lung, subcutaneous tissues, testes, uterus, or the pituitary.

It is not known whether the milk agent continues indefinitely in propagable tumors and whether its presence is required for the continued growth of such transplanted tumors. Preliminary investigations indicate that the presence of the milk agent is not necessary for the propagation of an established tumor, unless a latent phase is postulated. Tumor development is not necessary for transmission of the influence from mother or foster mother to offspring; in fact, under ordinary conditions the causal agent is transferred in the absence of recognized tumor, and this transfer continues for many generations. In this respect, the milk agent acts like a latent virus infection.

Up to the present, no changes in the organism have been described following the introduction of the milk agent. The mice are not sick and gain in weight equally as compared with animals without the milk influence. The onset of the estrus cycles and the character of the cycles for the first three months are unaltered. The adrenal changes following estrogen administrations or castration are not influenced by the presence or absence of the milk agent. The agent does not produce consistent and clear-cut alteration of the architecture of the mammary gland.

OTHER FACTORS IN THE GENESIS OF MAMMARY TUMORS IN MICE

The current concept of the etiology of mammary tumors in mice, as expressed by Bittner, is that at least three factors must be present for their development, (1) an inherited susceptibility, (2) hormonal stimulation, and (3) an active agent that is generally transmitted through the milk. All three factors must be present for the genesis of mammary carcinoma.

These three sets of factors, however, by no means exhaust the number of influences that may play a role in the genesis of these tumors. Of these, nutrition has received the greatest attention. Underfeeding of the total balanced diet or of certain essential constituents thereof, such as sulfur-containing amino acids, reduces the occurrence of mammary tumors.

The mere reduction of a balanced ad libitum diet by one-third led to the total suppression of mammary tumors in a highly susceptible strain possessing the milk agent. The mechanism is probably the production of pituitary insufficiency which leads to a lowered level of ovarian secretion and a relative refractoriness of the mammary gland to estrogenic substances.

It has been reported that the incidence of mammary tumors is increased and the average tumor age is decreased in mice kept at an environmental temperature of 68 degrees F. as compared with mice living at a temperature of 91 degrees F. Even such mild environmental changes as crowding or isolating animals are reflected in the incidence and time of appearance of mammary tumors, probably because of the effect of these factors on food consumption and the estrus cycle.

Furthermore, data have been accumulating to the effect that not all mammary tumors in mice are associated with or due to the presence of the milk agent. Perhaps the most striking demonstrations have been with animals injected with methylcholanthrene, a polycyclic hydrocarbon that elicits a variety of tumors in mice at the site of introduction and at distant sites.

In 1939 it was shown that the appearance of mammary tumors was accelerated by methylcholanthrene on the skin of breeding female mice of the dba strain, known to possess the milk agent and genetic susceptibility to mammary tumors. Mammary tumors were not obtained in male mice, nor was the time of appearance of tumors accelerated in nonbreeding mice. Recently mammary tumors have been elicited by percutaneously administered methylcholanthrene in crosses of two genetically susceptible strains deprived of the milk agent.

Strong and his co-workers reported that a single subcutaneous injection of 1 mg. of methylcholanthrene produced mammary tumors in breeding mice of strains that were characterized by a very low incidence of mammary tumors. Such tumors, usually at the site of injection of the hydrocarbon and often mixed with sarcomatous elements, appeared in 45 of 384 females of the NH strain; of 198 untreated breeding mice, none developed tumors. Bonser and Orr in England also reported the appearance of mammary tumors in mice of two strains (IF and CBA) having a very low incidence of tumors in breeding females, following the subcutaneous or intranasal introduction of methylcholanthrene.

The presence of a transmissible agent in the milk of mice of the NH, NHO, and Bonser's CBA strain was excluded by foster-nursing tests. The work suggests that types of stimuli other than the milk agent may produce mammary tumors in mice. The data are not conclusive, however. It is possible that these strains may harbor the agent and not transmit it in

the milk. Experiments in which tumor material and other tissues are injected into and fed to susceptible mice deprived of the agent are indicated for further evidence in this problem.

Andervont made crosses between two genetically susceptible strains of mice that were deprived of the milk agent and obtained mammary tumors in 50 per cent of the animals. Moreover, extracts of 11 tumors were fed to susceptible mice and no tumors of the breast were elicited. It was concluded that even these data did not prove the absence of the milk agent in the genesis of the tumors, although they strongly suggested it.

The occasional occurrence of mammary tumors in mice of genetically resistant strains or in susceptible strains that have been deprived of the agent cannot be considered as demonstrating that the milk agent was excluded in the etiology of the tumors. In the first place, if the milk agent is some abnormal and transmissible constituent that arises from the cells or tissues of the animals, rather than an exogenous virus-like infection, its appearance *de novo* by some process like somatic mutation can be postulated. On the other hand, it is difficult to exclude simpler explanations such as accidental transmission of the agent from other mice by means of blood-sucking insects, or by ingestion of tissues or feces of the agent-harboring animals in the same or nearby cages.

Studies on the genesis of mammary tumors of mice indicate that the neoplastic reaction is the end result of an intricate interplay of at least four factors or complexes of factors:

1. The genetic constitution of the mouse influences mammary tumor development by determining the susceptibility of the mammary tissue to the hormones and the milk agent, by modifying or altering the mechanism of hormonal stimuli, and by determining the animal's resistance to the milk agent and its transmission. Genetic factors influencing this susceptibility are multiple and are expressed in degree. The ability of the animal to propagate the milk agent and susceptibility to mammary carcinoma may be governed by separate sets of genes.

2. Hormonal stimuli are essential for the development of the breast and, as such, at least for the creation of a suitable substrate for the action and interaction of other factors that eventuate in the development of mammary tumors. There is no evidence that the hormonal complex has to be abnormal, either qualitatively or quantitatively, for the genesis of mammary tumors in mice. Alterations induced in the hormonal balance by the addition or withdrawal of estrogens and other hormones modify the processes that lead to the development of tumors.

3. The milk agent, transmitted through the milk of the mother, is necessary for the appearance of most of the mammary tumors in mice. It should be emphasized that the virus nature of this agent is not established. However, if it is a virus, the appearance of mammary tumors would be influenced by variations in the virulence of the agent under various conditions, and its possible latent stages.

4. Various other environmental factors, such as diet, temperature, and overcrowding, also affect the genesis of mammary tumors, probably by modifying the growth and development of tissues and the hormonal secretions of the animals.

It is quite possible that at least some of the mammary tumors may require different or additional factors for their appearance and, conversely, that some mammary tumors do not require the presence of the milk agent and are of entirely different etiology. Our knowledge has now reached the stage where we can control most of the factors while varying the one under consideration. This allows a step-by-step evaluation of each of the factors. The shifting of attention from the genetic to the hormonal and thence to the milk influence has been due more to historical developments than to the established relative importance of these different influences. It is clear, however, that there is no single cause of mammary cancer of the mouse, but that the neoplastic reaction is the end result of a complex interplay between many factors.

What Are the Basic Needs for Public Health in California?

DWIGHT M. BISSELL, M.D., *San Jose*

TO meet the need for an organization to promote and safeguard public health in California, the State Legislature more than three-quarters of a century ago established the California State Board of Public Health. Thomas M. Logan, who had been president of the California Medical Association, was the first permanent secretary of this board, which numbered among its members such distinguished men as Henry Gibbons, J. F. Montgomery of Sacramento, and L. C. Lane of San Francisco.

Created at the beginning of the bacteriological era, the board was concerned with the many causes of death such as consumption, which was then the outstanding killer, other diseases of the lungs, diseases of the stomach and bowels, diphtheria, scarlatina, and "typho-malarial" fevers. The board recognized the value of collecting vital data and interpreting it as one of the basic essentials of good public health. Because it was difficult for the secretary to secure good data from official records, he went to great effort to get statistics from lodges which insured their members, from local boards of health, from practicing physicians, and from every other accessible source. The data were compiled in carefully prepared charts.

Indicative of the importance which was attached to vital data at that time is the following quotation from Doctor Logan's annual report of 1870: "Faithfully collected and skillfully managed, these statistics furnish accurate knowledge of the most important facts of each citizen, and also the data upon which governments and communities, as well as individuals, may base their action. . . . Life, health, and property, all that man holds dear, are thus we see involved in these statistics." [1]

Today, it is just as important to have accurate birth and death data, morbidity data, including reports of rheumatic heart disease, crippled children, cancer, or any other diseases where the collection of vital data could be of assistance to any part of the medical profession in solving the problem of disease, reducing its occurrence and prolonging life. Accurate, vital data is necessary to guide public health activities and to show the places were emphasis must be placed in controlling particular diseases. Birth and death records are unusually complete in most parts of California. It is hoped that as all physicians see more value in morbidity reporting, it too will be greatly improved in many areas.

Thomas Logan's laboratory differed greatly from our modern public health laboratory, for it consisted for the most part of instruments for predicting the weather. Since he began his term of office just before the time that bacteriology became a science, it is not surprising that he thought that the weather greatly influenced the spread of communicable diseases. Indeed, much is still being written about the influence of weather on disease. Quoting from his report: "During the prevalence of the epidemic, the most remarkable fact in regard to this region [Santa Barbara] is the seeming impossibility for epidemics to visit it. The smallpox has ravaged the whole country three or four times since 1843. It has been singularly virulent in San Luis Obispo, the first town north of us, and also in Los Angeles, which lies in the next county south. During the prevalence of the epidemic, persons have come from these neighboring towns with the seeds of the disease, and have died in Santa Barbara within a few days of arriving, but some antiseptic property and the climate has prevented the contagion, and it has never spread. Scarlatina and diphtheria are unknown here. . . . The climate seems sufficient to cure the malady. During a residence of 20 years, I have only seen one case of membranous croup, and heard of two others."

GOOD LABORATORIES ESSENTIAL

Although meteorology has little place in the ordinary public health laboratory of today, the scientific basis for the determination of the causative agent of disease was begun in health departments in that day. In the light of knowledge of bacteria, viruses, and other disease-causing agents, the greatest need for any health department is a well equipped and staffed public health laboratory. No health officer would attempt to provide a pure milk supply or water supply or to control the communicable diseases without public health laboratory facilities. Most of the smaller public health laboratories find that routine laboratory procedures are adequate and that research procedures should be turned over to a state laboratory which is well prepared to carry out such work as laboratory studies in the field of encephalitis and other related virus diseases. In order to control syphilis, laboratory procedures are so essential that health departments have furnished private physicians and everyone concerned in the problem of diagnosing this disease with laboratory service whenever the patient is unable to pay a private laboratory fee.

The problem of maternal and child health was not overlooked by this first Board of Health in California. In a chapter entitled "Female Hygiene" in which an attempt had been made to point out the unnecessary illness following childbirth, the report says: "Towards obviating the perpetuity of these evils, which have existed from all time and in all places, and which strike at the vitals of society, we believe that it is our plain duty to disseminate such hygienic counsel, and if they may not have the power

Read before the section on Public Health at the 76th Annual Session of the California Medical Association in Los Angeles, April 30-May 3, 1947.

of always preventing the misfortunes to which female life is subject, will certainly weaken the morbific influences which produce them." The State Board of Health was so concerned with maternal and child health that it brought Doctor H. R. Storer of Boston to California for two lectures on female hygiene in order to prevent the terrific maternal and infant mortality which existed in that day, and to teach the medical profession something about gynecology. In his lecture he put constant emphasis on the prevention of disease.

Today, although there is a better understanding of ways to improve maternal and child health, the need for protecting the maternity patient from illness and death, and the need for giving the baby a start in life which will make him a healthy, well citizen remains a primary interest of the state, as it was in 1870.

With the work of Sir Edwin Chadwick, in England, in the early part of the 19th Century, and of Lemuel Shattuck in the United States at about the same time, the need for a pure water supply, adequate drainage, and, in general, the prevention of disease through sanitation, was brought to the forefront. Shattuck published his writings in the New York Journal of Medicine in 1851, and it was called "an epitome of Sanitary Science." Twenty years after the publication of this report, the secretary of the Massachusetts Board of Health based his recommendations for the development of public health legislation in that state on Shattuck's writings. Likewise, the California State Board of Health, which was established a few months after the Massachusetts Board of Health, based its health laws on this same work. To quote: "Massachusetts has been the first state to become awakened to the danger of the situation, and the 'Memorial of the Boston Sanitary Association' to the Legislature, in 1861, and from which I have freely drawn in preparing these remarks, has been answered by the institution of a State Board of Health, whose first annual report I now present for your consideration: You will perceive that the late action of our state has been based on that of Massachusetts, and we may, with reason, congratulate ourselves upon California being the first state to follow in the footsteps of the most enlightened Commonwealth in America." Empirical facts seemed to show that environmental sanitation was an important factor in the health of the people of California. Bacteriology later proved the reasons for these observations which had been made earlier by these men of science. However, like many another action based on half-truths, sanitation was sometimes carried to extremes, as evidenced by the fact that the streets of Philadelphia were thoroughly washed and scrubbed in order to stop an epidemic of yellow fever. Each year, environmental sanitation procedures should be reviewed in the light of newer discoveries and newer knowledge in the field of communicable disease and the spread of disease.

New problems are presented each day in environmental sanitation: The discovery of new insect vectors in the spread of encephalitis suggests new fields for attack: experience may dictate the abandonment of a procedure found to be ineffective. Constantly health departments must evaluate their procedures in the field of environmental sanitation to determine that which is basic and that which is either the responsibility of other divisions of government or completely unnecessary. Certainly well planned, well directed, and well scrutinized environmental sanitation is a basic function for every health department.

Probably the keystone in any health department is the control of communicable disease. For many years in California, the public health organizations have made every effort to control childhood diseases, adult diseases such as tuberculosis, venereal diseases, typhoid fever, dysentery, malaria and every other communicable disease. Although the first California State Board of Health did not have the contributions of bacteriology and virology which are used today, nevertheless, it recognized these sciences as essential parts of Public Health. Isolation and quarantine as well as fumigation, were practiced extensively, while today we have in many instances been able to substitute vaccination, immunization and chemotherapy for these older procedures. Actual treatment today in the field of tuberculosis and venereal diseases has been instrumental in preventing their spread. While many control measures for communicable diseases are known, much research still needs to be done. Pandemics of influenza still may sweep the world: the common cold still produces more days of time lost than any other communicable disease in the United States; venereal diseases attack an increasing number of the population. The control of communicable disease is still one of our basic Public Health needs.

One of the first duties at the conclusion of a year's work by the California State Board of Health was the preparation of an annual report which was designed to be "A readable and convenient size for public use"—a report of 203 pages, which cost a considerable share of the total Health Department budget to publish. This publication was not the first effort of the Board of Health in health education, for the board had previously held lectures for the medical profession, had conducted a great deal of correspondence with various lodges and fraternities in California, had implemented many other community groups to assist in prevention of disease. The whole tone of this first report is one of education, rather than one of establishing laws, even though it probably would not have been recognized as public health education in the meaning of the term as it is accepted today. Thus, basically, public health needs have remained essentially the same for 78 years, but in the light of research and the changed concepts of the cause of disease, the interpretation of basic Public Health has changed. To environmental sanitation, some health departments have added industrial hygiene. Industry has brought with it many problems as well as many benefits to communities. The effect each industry has upon the lives of the people who work in it, as well as the effect on persons who live near it, must be recognized. In the

prevention of disease and illness, dental and mental health play an important part in urban population groups todays, even though these fields were recognized only to a small degree in 1870.

Although many parts of California have realized the need for public health services, they have not been able to finance these basic needs. Inadequate revenue, overwhelming problems of public health, and many other factors have interfered with the adequate fulfillment of these basic needs. Public health has become a statewide problem as well as a local one with the development of means of travel by which people can travel between widely separated communities within a few hours. With the widening of scope, it has become necessary to use more state and federal funds in local health departments to solve the basic needs for Public Health in the state and the nation.

Although supplying the basic needs for public health requires well trained personnel, low salaries have left many health departments, which otherwise would meet basic needs, understaffed. Even if salaries were adequate, a large number of persons would have to be recruited and trained.

Much has been done to accomplish the basic needs for public health in many areas of the state, but the continued active support of the medical profession, which originated the California State Department of Public Health as well as many of the local boards of public health in California, is needed. It will continue to be through the leadership of organized medicine in this state that public health will flourish, that citizens of this state will not die unnecessarily or suffer unnecessary illnesses.

SUMMARY

Basic Public Health needs, which were recognized by the founders of Public Health in California, have developed and expanded. Today they are: (1) Complete registration of births, deaths, and morbidity, as well as analysis and interpretation of this data; (2) public health laboratory facilities to assist and guide the local health department with its analyses and reports; (3) adequate environmental sanitation, with recognition and evaluation of those conditions which are merely nuisances, yet are the responsibilities of public health departments; (4) the protection of maternal and child health; (5) health education, which has become as vital as laws and ordinances in the protection of public health, especially in securing community action to achieve the desired results in all fields of public health; (6) control of communicable diseases through prevention and treatment.

All the basic needs for public health can only be achieved when adequate funds, adequately trained and adequately paid personnel are available.

City Health Department, San Jose.

REFERENCE

1. First Report, Board of Health of California, 1870-1871.

Psychogenic Rheumatism: The Musculoskeletal Expression of Psychoneurosis

Edward W. Boland, M.D., *Los Angeles*

FOR the development of a psychosomatic disorder there are three requisites: (1) a psychoneurotic predisposition; (2) an exciting emotional conflict; (3) restriction of outward expression of the conflict. All individuals, whether normal or psychoneurotic, seek relief from the mental suffering occasioned by disturbing life problems. When emotional tension is expended by outward expression, muscular or verbal, all is well. By taking some form of action or doing something about it, the individual "gets it off his chest" and feels better. But if emotional dissipation is constantly restricted, the tension gradually mounts, and in a psychoneurotic type of individual especially, the development of somatic complaints may be the eventual outlet. With the emergence of bodily symptoms the psychoneurotic tends to focus his attention on them and thereby is partially relieved of his inner mental tension. The psychophysiologic mechanism by which psychic disturbances are displaced into physical symptoms is not fully understood—undoubtedly it is complex. Recent studies suggest that emotions may affect the autonomic nervous system either directly or through the endocrine system, thereby producing increased muscle tension, vasospasm or metabolic changes in various organs and structures.

Physicians in general are familiar with those functional symptoms or symptom complexes which are expressed in various systems, exclusive of the musculoskeletal system. The idea that structural changes in certain organs may result from psychic disturbances is also being accepted. The following is a partial list of disorders now recognized as psychosomatic: Gastrointestinal system—functional dyspepsia, anorexia nervosa, irritable colon, cardiospasm, pylorospasm, certain cases of peptic ulcer, and of chronic ulcerative colitis; cardiovascular system—neurocirculatory asthenia, effort syndrome, functional arrhythmias, acrocyanosis, Raynaud's disease, and certain cases of hypertension; respiratory system—certain cases of asthma, allergic rhinitis, and chronic bronchitis; Genito-urinary system—enuresis, vaginismus, certain cases of impotence, and dysmenorrhea; nervous system—functional headaches, migraine, hysterical anesthesias, paresthesias, paralyses, certain cases of epilepsy and chorea, etc.; skin—certain cases of pruritus, eczema, urticaria, and angioneurotic edema.

Physicians are not so familiar, however, with the fact that disabilities of the locomotor system frequently result from psychic causes. Too often functional musculoskeletal symptoms are mislabeled as arthritis or some other organic disease. By failing to recognize the true nature of the complaints and by treating the patient for arthritis the physician fosters rather than alleviates the disability. Psychogenic rheumatism may be defined as the musculoskeletal expression of functional disorders, tension states or psychoneurosis. It implies that such symptoms as pain, aching, stiffness, muscular fatigue, subjective sense of swelling or limitation of motion may be caused, intensified or perpetuated by mental influences. The term should be restricted to cases in which the actual disability results from functional symptoms. The usual minor nervous reactions which develop in patients with chronic arthritis should not be included—unless the functional overlay grows to the point that it becomes the major incapacitating factor.

Psychogenic rheumatism does not embrace in its concept the idea that organic joint disease may result from mental conflicts. That rheumatoid arthritis may at times be a psychosomatic disease has been suggested, but most authorities agree that psychic disturbances alone cannot cause the disease. Grief, worry or anxiety may occasionally act as precipitating agents and in some cases appear to be temporally related to fluctuations in the clinical course of rheumatoid arthritis. But while emotional upsets may act as trigger mechanisms to set off the disease process, it is probable that the body must first harbor the causative factor (infectious agent or whatever the factor is). In this sense rheumatoid arthritis cannot be considered as a psychosomatic disease. Actually in our experience, contrary to that of others,[3,7,12] emotional crises have seldom been related temporally to the onset of rheumatoid arthritis. In a special study[5] of possible precipitating factors in 100 soldiers with rheumatoid arthritis an emotional upset was considered as the possible factor in only one instance, much less often than other factors (infection 12 times, physical exposure nine times, joint trauma three times, physical exhaustion two times, etc.).

INCIDENCE

Psychogenic rheumatism must be included among the common rheumatic disorders, along with osteoarthritis, rheumatoid arthritis, primary fibrositis and rheumatic fever. Its incidence was appallingly high among soldiers with musculoskeletal incapacities admitted to military general hospitals and special arthritis centers. At such installations medical officers

Presented at the Postgraduate Course on Rheumatic Diseases sponsored by the American College of Physicians, Mayo Clinic, Rochester, Minnesota, March 23-28, 1947.

were especially on the outlook for psychogenic disorders and the incidence of functional symptoms displayed by the muscles and joints was found to be comparable to that demonstrated by other systems such as the gastrointestinal and cardiovascular. Psychogenic rheumatism was the most frequent cause of disability (34 per cent) in 450 consecutive soldiers with rheumatic complaints admitted to an army general hospital located in the United States.[1] These patients came to the hospital with a previous diagnosis of organic disease, usually arthritis. In a general hospital located overseas, Short[13] found that one-sixth (16.5 per cent) of 309 soldiers with articular complaints were incapacitated by psychogenic rheumatism, an incidence equalling that for osteoarthritis and exceeded only by that for rheumatoid arthritis. Flind and Barber[6] reported that in about 42 per cent of patients admitted to a Royal Air Force special rheumatic center, the disability was essentially psychogenic. A statistical variance of interest was that reported by Copeman[4]: At a British general hospital in France, where emotional factors must have been plentiful, 70 per cent of admissions were diagnosed as fibrositis and no mention was made of functional musculoskeletal complaints. Evaluated in the light of the military experience of others, many of his patients with "fibrositis" must have had psychogenic rheumatism. At the Rheumatism Centers of the United States Army, approximately one out of every seven soldiers was disabled because of psychogenic rheumatism. It was the second most common diagnosis at the Center at the Army and Navy General Hospital (exceeded only by rheumatoid arthritis) (Table 1)[2] and the third most common at the Center at Ashburn General Hospital (being exceeded by rheumatoid arthritis and osteoarthritis).

TABLE I.—*Incidence Rheumatic Diseases, Army Rheumatism Center, Army and Navy General Hospital*

Based on 7,000 Consecutive Admissions	No. Cases	Percent
Rheumatoid Arthritis (Peripheral and Spondylitis)	2,592	37.0
Psychogenic Rheumatism	1,021	14.6
Fibrositis (Primary and Secondary)	972	13.9
Osteoarthritis (Primary and Secondary)	772	11.0
Rheumatic Fever	82	1.2
Gouty Arthritis	48	0.7
Gonorrheal Arthritis	45	0.6
Rarer Arthropathies	95	1.3
Joint Tumors	20	0.3
Miscellaneous Conditions	653	9.3
Unclassified Arthritis	553	7.9
No Disease	125	1.8
	7,000	100.00

The incidence among civilian patients probably is almost as great as among soldiers, although as yet there are very little statistical data. Halliday,[8] working as a medical referee with the insured population of Scotland, found that 39 per cent of 145 consecutive patients labeled as having rheumatism (including fibrositis, lumbago, sciatica and neuritis) were incapacitated because of psychoneurosis. The incidence of "psychoneurotic rheumatism" was still greater (40-60 per cent) when only those on the sick list for two months or over were considered. A recent statistical survey of 500 consecutive private patients referred to the author because of rheumatic disease, discloses that the diagnosis of psychogenic rheumatism was made in 13.4 per cent. The incidence was less than that for osteoarthritis (25 per cent), rheumatoid arthritis (23.4 per cent) and primary fibrositis (18.2 per cent), but was far greater than for any of the remaining types. This series contained very few insured patients and no compensation cases.

DIAGNOSIS AND CLINICAL PICTURE

The diagnosis of psychogenic rheumatism is not made by excluding organic disease alone; positive evidence for psychoneurosis must also be established. Diagnosis depends on: (1) absence of organic disease or insufficient disease to account for the disability, (2) qualitative functional characteristics of the disability, (3) positive diagnosis of psychopathology.

Absence of Organic Disease or Insufficient Disease: Psychogenic rheumatism may be divided conveniently into three subtypes: (1) Pure—when clinical, laboratory and roentgenographic evidence of organic joint disease or muscle abnormalities are lacking; (2) Superimposed—when incapacitating psychogenic symptoms are associated with non-disabling organic changes; (3) Residual—when disability is perpetuated due to functional symptoms which take over after the disease process itself has subsided. The relative frequency of these subdivisions (among soldiers) based on 1,021 cases of psychogenic rheumatism at the Army Rheumatism Center, Army and Navy General Hospital, was as follows: Pure, 425 (41.6 per cent); superimposed, 404 (39.5 per cent); residual, 192 (18.9 per cent). A similar relative incidence probably occurs with compensation cases but among private patients the pure type is more common.

Disabling functional complaints are superimposed most frequently on the less serious rheumatic diseases, especially primary fibrositis and osteoarthritis, diseases which of themselves usually have nuisance value only; rarely are they superimposed on a serious articular disease such as rheumatoid arthritis (Table 2). By far the most common association both in civilian and military practice is with fibrositis. This

TABLE 2.—*Diseases Associated with "Superimposed" Psychogenic Rheumatism*

Rheumatoid Arthritis	1
Osteoarthritis	10
Primary Fibrositis	33
Secondary Fibrositis	2
Unclassified Arthritis	3
*Miscellaneous	14
	63

*Unstable lower back, sciatica of undetermined cause, ruptured intervertebral disc, internal derrangement of knee, traumatic synovitis, pes planus, scoliosis, etc.

syndrome, which rarely is incapacitating, except during acute phases which do not persist indefinitely, may engender chronic invalidism in the psychoneurotic individual. The overlay of functional symptoms may be so intense that ability to carry on may be less than in patients with well developed rheumatoid arthritis. The differentiation between psychogenic rheumatism and primary fibrositis often is not easy, and when the two conditions co-exist attempts to appraise the proportion of the disability caused by each are even more difficult. Another frequent association is with osteoarthritis. Minimal spurring in the lumbar spine or knees may be accompanied by marked and persistent disability, far out of proportion to that usually seen with such changes, especially if the patient is aware of the findings and develops an anxiety reaction to them. Such gross incongruities between the severity of the symptoms and the structural changes are immediately striking to the experienced physician.

TABLE 3.—*Diseases Associated with "Residual" Psychogenic Rheumatism*

Rheumatoid Arthritis	1
Primary Fibrositis	5
Unclassified Arthritis	1
Fractured Spine	2
Minor Back Injuries	7
Fractured Ankle	2
Traumatic Synovitis	2
	20

Residual psychogenic rheumatism, in our experience, most frequently follows trauma to the musculoskeletal system; less often does joint disability persist after subsidence of a primary rheumatic disease such as rheumatoid arthritis, rheumatic fever, gout, etc. (Table 3). After some minor injury, the symptoms of which ordinarily would subside in a few days or at most a few weeks, the patients may have intractable symptoms for months or even years. Among soldiers persistent disability following minor back injuries was particularly common; often recovery failed to result even after prolonged bed rest or immobilization. In such cases a gradual change in the nature of the symptoms usually develops as time goes on. Although the initial symptoms may be typical of organic disease, the complaints eventually assume obvious functional characteristics, and associated psychoneurotic manifestations in other systems may appear.

Functional Characteristics of Presenting Disability: The most common symptoms are "pain," tenseness, stiffness, limitation of motion, subjective sense of swelling, muscular fatigue and weakness of an involved part. The complaints more often are generalized, are "all over," but may predominate in one region or another. Sometimes they are vague in quality and location—"Can't quite tell you where it is or what it's like." Mental distraction at a movie, football game or social gathering may give temporary relief, and exacerbations with or following episodes of emotional stress or mental fatigue are almost the rule. Pain is practically a universal complaint but on close questioning often is found to have functional characteristics. It may be fleeting or constant, "bad all the time," "present day and night." Salicylates often have no effect and local heat and other physiotherapeutic measures fail to give relief or may "make thinks worse." The distribution of pain often is not anatomical; instead of being located in or about joints, for example, it may skip "here, there and elsewhere" with utter disrespect for anatomy. Such sensations as weakness, fatigue, pricking, tingling, numbness, deadness, burning, fullness and pressure may be interpreted by the patient as pain. Analysis may show that the victim does not have pain at all in the strict sense, but only paresthesias. When aching and stiffness are the predominant symptoms usually they fail to fluctuate with external environmental factors such as weather changes and physical activity. The discomfort in patients with psychogenic rheumatism almost invariably is augmented by use of the involved part.

On physical examination varying degrees of muscle spasm may be found, and when marked may be accompanied by limitation of joint motion. A tense, anxious, defensive or antagonistic attitude is often apparent. On examination the patient may be fearful or resistant, may cry out with pain on palpation or movement of a normal appearing joint, may over-react, jump, grimace or groan on light palpation of the erector spinae muscles, or may grasp the examining hand in protest to being hurt; in general, a "touch-me-not" reaction. In soldiers, as in compensation cases, major hysterical conversions as manifested by bizarre limps, gaits and postures are displayed occasionally.

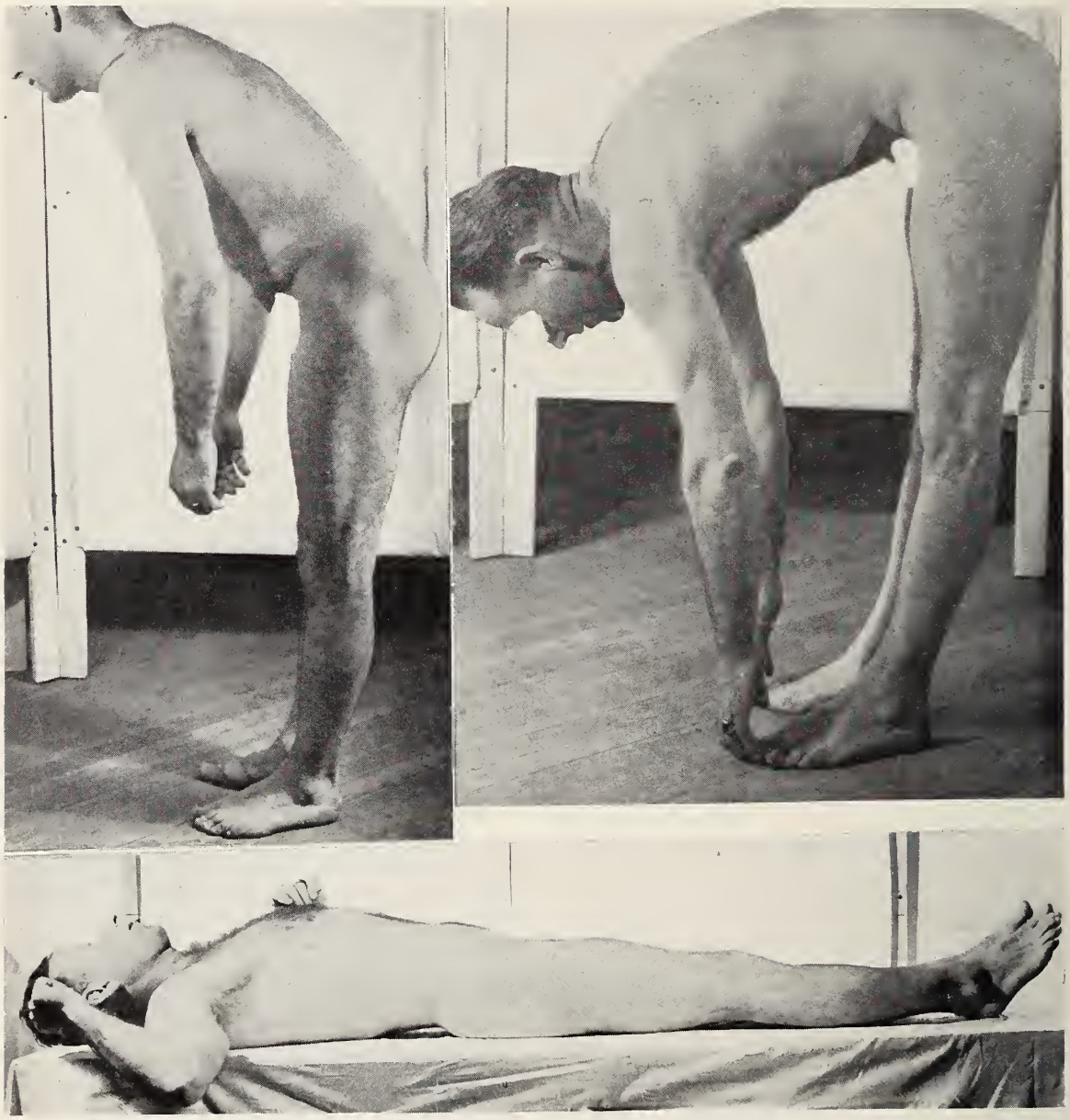
Positive Diagnosis of Psychopathology: To establish positive evidence for the diagnosis of neurosis is just as important as ruling out organic disease. The functional nature of the presenting complaints as already discussed, the presence of other psychoneurotic symptoms, the patient's past history and family history of emotional instability, and the presence of an exciting mental conflict, are considerations in this respect.

Evidence of Coexisting Psychoneurosis: Associated functional manifestations (headaches, dyspepsia, globus hystericus, sighing respirations, precordial pains, insomnia, tremors, cold moist hands and feet, anxiety, nervousness, etc.) are present in the majority of cases. Such psychoneurotic complaints were present in 46 of 50 (92 per cent) soldiers with psychogenic rheumatism studied at Hoff General Hospital and in 179 (89.5 per cent) of 200 cases studied at the Rheumatism Center, Army and Navy General Hospital. An interesting test was made by Flind and Barber [6]: Seventeen patients with psychogenic rheumatism were submitted to a swimming test; all but one had to give up "after a few yards" because "it was too frightening." Weiss [14] attempted to make precise psychiatric diagnoses in 40 patients with functional musculoskeletal disabilities; hysteria was diagnosed in 16 patients, anxiety states in 11, hypochondriasis in two, psychotic de-

pressions in two, an "underlying neurotic character" without specific classification in nine.

Psychoneurotic Predisposition: In practically all instances evidence of previous neurotic traits may be elicited. Such traits present in childhood and persisting to adult life suggest a liability to neurotic reaction under stress. Past histories of enuresis, somnambulism, nightmares, temper tantrums, morbid fears (fear of darkness, of death, or of illness), stammering, fainting spells, etc., are given by many. Boland and Corr [1] found that approximately one-third of their patients had experienced disabling psychoneurotic or hysterical episodes prior to the onset of psychogenic rheumatism. These ranged from attempted suicide to interruptions in schooling because of "nervousness."

Halliday [9] believes that most patients with psychogenic musculoskeletal disabilities have similar personalities. He pictures them as displaying obsessional trends with self-limitation and restriction of feeling. As children they are said to be shy and in later life are over orderly, punctual and clean, tending to live quietly, often as "home birds." He contrasts this personality with that found in patients with functional dyspepsia or peptic ulcer, described as showing compulsive drives, over-emphasized activity, efficiency and independence; being especially susceptible to threats against security and to changes of



Upper left—Hysterical bent back (camptocormia). Patient unable to straighten back while in standing position. Upper right—Although unable to straighten spine while standing, the same patient is able to accomplish complete anterior flexion without discomfort. Lower—Same patient demonstrating ability to straighten back in recumbent position. Note the normal lumbar lordosis.

authority. However, various types of personalities have been found in our patients. Not all of them have been "mousy fellows"; some have been dynamic extroverts and others frank exhibitionists, especially those displaying gross hysterias.

Precipitating Emotional Factors: These are often difficult to ferret out, as the patient may be unaware of them himself. Multiple interviews are frequently necessary to elicit the environmental factors or external events which precipitated a deep-seated emotional reaction. Only by following the sequence of happenings prior to the onset of symptoms can clues be found in some instances. Then, once the clue is found, pressing direct questions will often cause the patient to expose the disturbing event or circumstance. The precipitating factors which cause frustration in civil life are manifold; most of them provoke a sense of grief, rage or guilt. Hench [10] cites a few examples: "A stern parent interferring with a child's social development; an unattractive girl dominated by her protective mother and afraid the boys were passing her by; a person who previously was 'impressed' by her parents and who considered herself 'impressed' by her in-laws; a veteran forced by the housing shortage to live with in-laws (enough to give anyone psychoneurosis!!); a common American trouble—'one vacation in ten years'; sexual impotence of the patient or the marital partner; June-December marriages: a spinster who had given up marriage to care for her mother whom she had thereafter unconsciously come to hate; fear of an unfaithful, drunken husband; a patient whose relative died of 'rheumatism' and who feared that his own rheumatism might also be fatal." Among military personnel, additional factors existed to induce anxiety. These included: (1) the loss of security or love caused by separation from a wife, family or home, (2) the loss of ability to control one's personal destiny, (3) resentment at authority especially when such is invested in those felt to be inferior, (4) fear of bodily harm, (5) confusion resulting from strange surroundings, crowding, regimentation and competition, (6) the concern for the safety and financial well-being of dependents, (7) indignation over lack of promotion, and (8) worry over fidelity of wife or fiancee.

Psychopathology: Weiss regards "smoldering resentment" to be the common basic psychopathology in psychogenic rheumatism. He pictures resentment as breeding chronic discontent and a feeling of rebellion. But the outward display of rebellion is inhibited for one reason or another, such as filial respect or fear of authority. The continuous sense of hostility, according to his concept, prevents the patient from relaxing, with the result that constant muscle tension develops which leads to symptoms of aching, tenseness and muscular fatigue. Regard-



Another example of hysterical bent back. Postural correction resulted following narcosis studies and suggestion.



A hysterical bent knee. The patient could straighten the knee fully while lying but not while standing. He walked with a bizarre gait, throwing the foot outward and semi-squatting with each step.



Left—Hysterical deformity of the right hand of 11 months' duration. Under sodium amytal narcosis the patient was able to move the fingers normally. Right—Roentgenograms of the involved hand showing marked diffuse secondary bone atrophy from disuse.

less of the underlying psychologic mechanism, the somatic effect of chronic muscle spasm appears plausible. This can be appreciated by most physicians who have experienced muscular aching and fatigue after periods of prolonged nervous tension.

LOCALIZATION OF SYMPTOMS

It is interesting to speculate why the psychoneurotic individual may subconsciously choose the musculoskeletal system for expression of somatic symptoms. In most instances fixation is probably prompted by past or present experiences, or by expediency. In cases of superimposed and residual psychogenic rheumatism, a present or immediately preceding example of a type of disability is suggested to the patient. In cases of pure psychogenic rheumatism such examples, though not as direct, may be found also. In one-third of our patients[1] examples of arthritic invalidism were present in the immediate families and approximately two-thirds gave a history, recent or remote, of traumatic or inflammatory joint disease in their past lives. Had examples of stomach trouble existed instead, it is probable that some form of functional dyspepsia rather than psychogenic rheumatism would have developed in response to the same emotional stresses.

The back and lower extremities were the favored sites for localization of the predominant complaints in soldiers. Boland and Corr[1] found that in 38 of 50 soldiers (76 per cent) the predominant symptoms were located in these regions. They suggested that this election of somatic fixation bore an expedient relationship to the attempted solution of an emotional conflict, "as these structures are synonymous with marching and soldiering."

DIFFERENTIAL DIAGNOSIS

Primary fibrositis is the principal rheumatic condition from which psychogenic rheumatism must be distinguished. In both conditions the diagnosis is based largely on the qualitative characteristics of subjective complaints and differentiation may require a detailed analysis of the symptoms. Hench and Boland[11] have listed the chief points which allow these two syndromes to be differentiated. Table 4 is adopted from their summary.

TERMINOLOGY

The term psychogenic rheumatism has not suited all rheumatologists and psychiatrists. Some[14] contend that the word rheumatism is too vague and already is surrounded by enough opprobrium without linking the word psychogenic to it. But functional muscle and joint complaints are often vague too, and the word psychogenic at least points to the origin of the symptoms. The word psychosomatic is objectionable because more and more it is being used to imply that actual organic changes are caused directly by mental influences. Whereas, this may be true in certain structures, evidence does not support those who suggest that certain common organic joint diseases may represent psychosomatic disorders. Psychiatrists prefer to use psychiatric diagnoses based on underlying psychologic processes to catalogue the musculoskeletal symptoms, using such terms as anxiety-depressive state, conversion hysteria, and hypochondriasis. However, internists and orthopedists cannot be expected to be trained psychiatrists any more than psychiatrists can be expected to be trained rheumatologists.

In practice the diagnosis of functional disease starts by recognizing that the complaints and findings do not conform with those found with organic disease. The first tip-off is the qualitative characteristics of the bodily symptoms; exploration of psychologic deviations comes later. Designations such as "psychoneurosis, anxiety state, as manifested by musculoskeletal symptoms," may be more accurate but are cumbersome. Although objectionable to some, the term "psychogenic rheumatism" is convenient and compact. If its limitations are understood it can serve as a useful label, at least until a better one comes along. It matters little if some object to the name, so long as they accept the fact that all aches and pains in and about muscles and joints are not due to organic disease of these structures.

2210 West Third Street.

TABLE 4.—*Differentiating Points Between Psychogenic Rheumatism and Primary Fibrositis*

	PSYCHOGENIC RHEUMATISM	PRIMARY FIBROSITIS
Patient's attitude:	Tense, apprehensive, "subjective," often antagonistic or defensive.	Usually "objective" and cooperative.
Chief symptoms:	Often vague. On analysis "pain" may consist of such sensations as burning, tightness, fullness, numbness, weakness, tingling pressure or "queer feeling." Muscles and joints may be "tense" rather than stiff.	Usually definite. Consist of aching, soreness and stiffness.
Factors influencing symptoms:	Symptoms, in general, fluctuate with changes in internal or mental environment: Tend to be worse during or following emotional stress, and temporarily relieved by mental distraction (theater, social gathering, football game, etc.).	Symptoms fluctuate with changes in external or physical environment: Made worse by physical inactivity and damp weather, and ameliorated by dry warm weather, physical activity, local heat, etc.
Degree of Disability:	Variable but may be severe and always disproportionate to physical findings. Disability may be greater than with serious joint disease.	Usually not marked—symptoms are a "nuisance" to patient.
Constancy of complaints:	Tend to be constant, "bad all the time" or "getting worse." Exercise almost always aggravated.	Subject to exacerbations and remissions—may last days or weeks, then disappear. Intensity varies during day; worse in morning and after physical inactivity, better after mild exercise.
Location of symptoms:	Often not anatomical, may "skip here, there and elsewhere."	Anatomical. If symptoms migrate they do so with respect for anatomy of joints and for muscles.
Response to examination:	Patient often over-reacts, is tense, and resistant; a general "touch-me-not" attitude.	Cooperative. Pain and tenderness are consistent and mental distraction is without effect.
Response to treatment:	Variable but often nothing relieves. Salicylates frequently are ineffective and local heat may make worse; alcoholic beverages relieve temporarily.	Temporary relief from salicylates, local heat and other physiotherapy.
Association functional complaints:	Almost invariably present, e.i., nervousness, tremulousness, cold, moist hands, insomnia, globus hystericus, headaches, sighing respirations, bizarre postures and limps, etc.	Usual minimal or absent.
Positive evidence of psychopathology:	Present, e.i., psychoneurotic predisposition, precipitating emotional conflict, underlying resentment or frustration, coexisting anxiety, depressive hypochondriacal or hysterical reaction, etc.	Usually absent.

REFERENCES

1. Boland, E. W., and Corr, W. P.: Psychogenic rheumatism, J.A.M.A., 123:805-809 (Nov. 27), 1943.

2. Boland, E. W., Stephens, C. A. L. Jr., and Hench, P. S.: The incidence of rheumatic diseases among soldiers: Based on 7,000 consecutive admissions to an army rheumatism center. (To be published.)

3. Cecil, R. L.: Environmental factors in the etiology of rheumatic conditions, M. Clin. North America, 29:566-570 (May), 1945.

4. Copeman, W. S. C.: Treatment of the rheumatic diseases in the field, Brit. J. Phys. Med., 5:161-165 (Nov.-Dec.), 1942.

5. Finney, J. O., Boland, E. W., and Hench, P. S.: Predisposing and precipitating factors in rheumatoid arthritis: Based on a study of 100 soldiers. (In publication.)

6. Flind, J., and Barber, H. S.: The psychogenic basis of some so-called rheumatic pains, Quart. J. Med., 54:57-74 (April), 1945.

7. Halliday, J. L.: Psychosomatic medicine and the rheumatism problem, Practitioner, 152:6-15 (Jan.), 1944.

8. Halliday, J. L.: The concept of psychosomatic rheumatism, Ann. Int. Med., 15:666-677 (Oct.), 1941.

9. Halliday, J. L.: Concept of psychosomatic affection, Lancet, 2:692-696 (Dec. 4), 1943.

10. Hench, P. S.: A clinic on psychogenic rheumatism, presented at the Interstate Post-Graduate Medical Assembly (Cleveland, Oct. 15-18, 1946). (In publication.)

11. Hench, P. S., and Boland, E. W.: The management of chronic arthritis and other rheumatic diseases among soldiers of the United States Army, Ann. Int. Med., 24:808-825 (May), 1946.

12. Patterson, R. M.: Craig, J. B., Waggoner, R. W., and Freyberg, Richard: Studies of the relationship between emotional factors and rheumatoid arthritis, Am. J. Psychiatry, 6:775-780 (May), 1943.

13. Short, C. L.: Arthritis in the Mediterranean theater of operations, I. Incidence of joint disease—clinical description of rheumatoid arthritis, New Eng. J. Med., 236:383-391 (Mar. 13), 1947.

14. Weiss, Edward: Psychogenic rheumatism, Ann. Int. Med. (In publication.)

The Section on General Practice

Its Problems, Its Goals, Its Responsibilities

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THE California Medical Association, like most things Californian, has always been noted for its broadmindedness and for its optimistic long-range view on matters of consequence.

The 76th annual session of the Association is another one of the bright spots in our record, and one which the historian of the future will mark with a red pencil; for we of the General Practice group are assembled here today for the first time in the history of the California Medical Association as a recognized and an organized Section on General Practice. Today, for the first time in the history of the California Medical Association, the men and the women engaged in the general practice of medicine can meet at a state convention with those of like status in a section of our own where we can discuss problems in which we are interested in a manner suitable to ourselves.

A Section on General Practice was authorized in the Los Angeles County Medical Association in late 1945. About the same time, members of the Alameda County Medical Association also formed a Section on General Practice. Strange indeed that the movement should have started in the north and in the south at about the same time, each group bringing its plans to fruition without the knowledge of the other, and each group thinking it was fighting a lone and an unpopular battle.

I will never forget how happy the president of the northern group and the president of the southern group were when they met in this hotel at the state meeting last May, and each found that instead of having to be a lone crusader on the general practice question, he was joined by his counterpart from the opposite end of the state with a complete organization. Consequently it was much easier for us to go to the House of Delegates and to the Reference Committee with our problem. As you now know, the House of Delegates voted unanimously that we should have a section of our own.

We have all been asked: Why a Section on General Practice? Why can't you men get all you want by going to the General Surgery Section or to the Obstetrics and Gynecology Section, or the Internal Medicine Section or the Pediatrics Section? Every last one of you in front of me can answer that question without giving it a second thought. Our work demands a broad and a comprehensive view of the medical field. You all know that we jump from otitis media to endocervicitis, to cholecystitis, to prenatal care, to Colles' fracture or the "itch" or what have you just as fast as we can walk down the hall of our office, from one examining room to the next.

Ours is not the monotony of the man who confines his work to the left nostril or the right kidney. We must, of necessity, have a working knowledge of the whole field. We must be diagnosticians. We must be able to give the patient relief or he and his family will leave us and go on down the street to some doctor who can. But there is another reason why we must have a Section on General Practice and that is: In administrative medicine the outlook, the ideals and the goals of the man doing general practice are very different from those of the man in a specialty group, and must of necessity be handled in a different manner.

What are some of our problems?

By and large all the specialty groups are very much in sympathy with the general practice group. Most of them can remember only too well the days when they made night calls and did the routine spade work of the practice of medicine.

The general practice group must recognize as one of its responsibilities its duty to keep in constant and close touch with all the other sections. The members of the other sections in this way will be kept constantly aware of our changing needs. We must find out why we so frequently do not have our proportional representation in all organized medical activities. We must find out why our members of the general practice group do not attend the county medical association meetings and are not better acquainted with the current problems of the day, whether they be problems of administration and policy, or just run-of-the-mill work. For too many years the man doing general practice has been too willing to let the specialty men do too much of the work of the county society. If the general practitioner wants privilege, he must be willing to do more of the work than he has been doing in the past.

This also applies to county hospital clinics. Many of the best specialists of the country today have become efficient because of the long hours they have been willing to spend in the county hospital clinics and in other charity clinics. I hear many general practice men saying they do too much charity work in their office already, so why should they waste their time in county hospital clinics. We must remember that the best clinicians are those who are constantly seeing new problem cases and learning new angles of approach to the old ones. For many years men doing general practice were shut out of many of the charity clinics because the administrators thought that only specialists should see the patients there. That day is rapidly passing. More opportunity is being offered

Presented before the sections on General Practice and Anesthesiology at the 76th Annual Session of the California Medical Association in Los Angeles, April 30-May 3, 1947.

the general practitioner in the clinics today, and he should avail himself of this way of broadening his knowledge.

The general practice man feels that he is not getting his share of the available beds in the private hospitals. We all know how acute this shortage of hospital beds is, and we feel hurt and slighted every time we call a hospital and find we cannot have a bed immediately. The next time we can't get a bed, before we start to grumble, let us ask ourselves: How am I relating myself to my hospital? Am I on speaking terms with the superintendent? Have I done anything to help in the hospital administration problems? Was I really too busy to teach that class of nurses when I was asked? Am I doing first class work in this hospital? Do I keep my records up to date without having to be prodded by the record librarian? If we can really clear ourselves in a simple questionnaire such as this but still can't get our share of the beds, then perhaps we do have cause to feel that we are being discriminated against.

Every one of us, in his spare time, has been caught tinkering on his car or doing an odd job of painting or carpenter work around the house and had someone kid him by asking for a union card. We know that the unions do not allow a carpenter to fix a leaky faucet or a painter to adjust the woodwork before he paints it. We have even laughed about it and said how ridiculous the unions are to be so strict and narrow-minded.

Have you ever thought how ridiculous the practice of medicine might become in almost the same way? The gynecologist may do a hysterectomy or a salpingectomy or an oophorectomy, but he must not *per se* do an appendectomy no matter how close the tip of the appendix may be to the fimbrinated end of the right tube. That is: the gynecologist must not do an appendectomy *per se* if he is abiding strictly by the rules of his specialty. The gynecologist certainly won't dare do an appendectomy *per se* if the abdominal surgeon on the staff of his hospital happens to be in the operating room and is unfriendly.

The only man who can "play the whole orchestra" in the practice of medicine is the man who belongs to our group—the man who has a license from the state to take care of the sick, and who has not joined any of the specialty boards. I am not going to elaborate on this thought any more. I am going to leave it by asking just one question: Can we today, in any of the major metropolitan hospitals, practice medicine as the state has licensed us to do? In the metropolitan hospitals there is only a handful of men doing general practice who are allowed to do surgical operations.

WHAT ARE OUR DUTIES AS A GROUP?

The general practice group is still in its very infancy, but we are already talking loudly about what we would like to see changed to help our status in the hospitals and in administrative medicine in general.

Before we concern ourselves with these questions I would like to draw your attention to some of our duties and obligations. First: A man should be a thoroughly good doctor, whatever group he belongs to. A man belonging to the general practice group should take particular pains to see that he is as nearly correct in his answers as possible. He should not excuse himself by saying "I am only doing general practice." It is much better when in doubt to call for consultation than to jeopardize the patient and one's own status by giving questionable treatment. The minimum duty of a general practitioner is to attend faithfully his hospital staff meetings. He is sure to learn something scientific each time, and further, it brings him in contact with his fellow staff members.

As far as it is possible, he should attend his county medical association general meetings, but particularly he should attend his section meetings of the county medical association. Again, every doctor owes it to himself to leave his office occasionally. Patients are proud of their doctor because he took time to go to the state medical meeting and to the national meeting. They talk very freely about their doctor being up to date and progressive and knowing the very latest. They contrast him very freely with Dr. Joe Doakes down the street who has not been out of town for the past 15 years and is so far behind the times that he thinks penicillin is the name of one of Mussolini's girl friends.

Besides attending these sundry meetings at which the busy general practitioner can relax, he should also never forget that his days of study and learning are never over. The medical schools are again all giving excellent postgraduate courses. Don't let any man think he can be a success in his office or in his hospital if he does not take a few weeks occasionally to bring himself up to date on the work he most enjoys.

The man doing general practice is largely looked up to in his community as a leader. He should not try to shirk such responsibility. He should keep reasonably abreast of local and other politics. Of course it is not good for a doctor to get deeply involved in politics, but he should be able to give good advice at all times. He should keep abreast of all civic matters, particularly where medical questions are concerned. He should be prepared to address local organizations on current matters without being naive. He should make it his business to be acquainted with at least some of his city and county officials so that he can use his influence at the proper time.

The man doing general practice should be most particular about his relations with his fellow doctors. He should never be caught talking about their work in a disparaging manner. He should never even raise his eyebrows or let out a whistle when he hears from his patients how Dr. Brown treated Mrs. Smith for such and such a condition.

WHAT ARE OUR GOALS?

Having squared ourselves briefly on our duties, and having glanced at our problems and our gripes, may we ask ourselves now, what are our goals?

1. The first and primary concern of the Section on

General Practice must be to see to it that each and every one of its members is top flight, not only as a citizen in general, but particularly as a doctor of medicine. We who are trying to regain lost privilege and prestige must be sure we do not live in glass houses which our brethren can destroy with stones.

2. A Section on General Practice in each county society of the state.

3. Proper representation of the General Practice Section on the council of each county medical association.

4. A Section on General Practice in every hospital.

5. Equal number of beds per capita in every hospital for the general practitioner and the specialty groups.

6. That every man doing general practice be allowed free access to every department of the hospital, providing of course that in each individual case he does not attempt to exceed his ability, and that he pledges himself to call for consultation as soon as he feels himself approaching the thin ice, rather than waiting until he is already in deep water.

7. That the man doing general practice should try to make himself more friendly and agreeable and affable than ever in the past, and that he should be the first to extend the hand and make the approach in the desired reforms rather than waiting and hoping that some friend in some specialty group will bring about the reforms for him.

8. That the medical schools throughout the country be approached on the idea of establishing a Department of General Practice and that the American specialty boards and the American colleges be encouraged to insist that their candidates not only spend adequate time in the Department of General Practice, but also that they spend at least three years in general practice as a prerequisite to their certification so that they can become acquainted with the humanitarian side of the practice of medicine as well as the technical side. The Medical School of the University of Colorado is already taking steps in this direction.

Time will not permit going into detail on other goals, but these are the outstanding items, and if they are attained within the reasonable future, the man doing general practice will find himself on a new plane, possessed of new courage and ambition, and will find his daily work more satisfactory than ever before.

ACCOMPLISHMENTS

What have we, as a group, been able to accomplish to date? In the words of the late Al Smith, "Let's take a look at the record." It must be remembered that we are still in our swaddling clothes and we are travelling a rough and an uncharted course. The officers of the section, whether they be local, state or national are all hardworking men. They have spent countless hours in perfecting constitutions and by-laws. They have carried on a voluminous correspondence with every interested party which would give them time and attention.

The Section on General Practice is not a local or a state idea only. In 1945 a section was authorized in the American Medical Association on somewhat of a trial basis, and it was given permanent status at the San Francisco meeting in July, 1946. Dr. Paul Davis of Akron, Ohio, was elected chairman. A vice-chairman was selected from California, and Dr. W. B. Harm of Detroit, Michigan, was elected secretary.

In California, besides our state section, we have county sections in San Francisco, Alameda, San Mateo, Yuba-Sutter, Los Angeles, San Diego and Santa Barbara; and other county sections both in the north and in the south are in the organizing process.

It is very remarkable how many friends we have among the men in high places. Dr. Henry Luce of Detroit, himself not a general practitioner, was more responsible than any other one man for our getting a section in the American Medical Association. Dr. Vincent Askey of Los Angeles, a Fellow of the American College of Surgeons, championed our cause at the meeting of the House of Delegates of the American Medical Association in Chicago in January, 1947, and was successful in getting a resolution passed which called for better status for the general practitioner in every recognized hospital in the United States. I, personally, and as an officer of the section have had much encouragement for our cause from no less a man than Dr. Malcolm MacEachern of the American College of Surgeons. Dr. Wingate Johnson, head of the Department of Medicine of Wake Forest College, North Carolina, and Dr. Howard West, medical director of the Los Angeles County General Hospital, have given us freely of their time and advice. There are numerous other men of influence who have given a great deal of thought to the status of the man doing general practice. It has been urged that we establish an American Board of General Practice.

We must now realize that we, the Section on General Practice, are more a part of American medicine than ever before. We are an organized and a recognized section. Of the 160,000 doctors of medicine in the American Medical Association, about 30,000 belong to the specialty boards or to the colleges. About another 25,000 are qualified for these certificates but will not go after them for various reasons. This leaves about 105,000 men who do general practice in the truer sense. It is to this group of men that your officers say: Join your organized section and follow your group leaders. Always, in all your efforts, be pro-general practice, and remember you do our cause no good by being anti-specialist. We are all fighting the battle against socialized medicine, and if we do not hang together we will surely, in the words of Benjamin Franklin, hang separately.

If you forget everything else that has been said in this address, take this one thought home with you and conduct yourself accordingly: The General Practice Group is probably the last bulwark between medicine as we know it today, and the phantom of socialized medicine which is dancing on our horizon, for in this group is the beloved family doctor so dear to the heart of Mr. and Mrs. America.

8726 S. Vermont Avenue.

Diverticulosis and Diverticulitis of the Colon

A Study of 100 Cases

Robert W. Quinn, M.D., *New Haven, Connecticut*

In the past 25 years diverticulosis of the colon has been recognized much more frequently due to the increasing use of opaque media in x-ray examination of the bowel. As the literature on the subject is becoming relatively extensive, it is well to review current knowledge and to present further clinical data.

DEFINITION

The term "diverticulum" comes from the Latin diverticulum, meaning a bypath. When multiple diverticula of the colon are present, the condition is known as diverticulosis. Inflammation of a diverticulum is termed diverticulitis.

CLASSIFICATION

A simple classification of diverticula has been offered by Edwards [2]:

1. Congenital diverticula.
 (1) Meckelian.
 (2) Non-Meckelian.
2. Acquired diverticula.
 (1) Primary—Hernial protrusions of the mucous and submucous coats through a gap in the muscular coat.
 (2) Secondary.
 a. Associated with disease of the neighboring intestinal wall.
 b. Traction diverticula.
 c. Pseudo-diverticula.

INCIDENCE

A study of 7,000 consecutive autopsies by Kocour [4] at the Cook County Hospital discloses that diverticulosis was shown in 3.58 per cent of the cases in which the patients had been over 40 years of age. Four hundred patients with diverticula of the colon were seen at the Mayo Clinic from January 1, 1938, to June 30, 1939.[3] During 1941-42 at the Faulkner Hospital in Boston, barium enemas were given to aid in the diagnosis of abdominal symptoms in 423 cases. Diverticulosis of the colon was found in 154 (36 per cent).[7] During a period of more than 13 years (1925-38) 2,139 examinations of the colon, using barium enemas, were made at Kings College Hospital, London.[2] In 254 of them (11.87 per cent) diverticula were found. Miller [6] reviewed 100 routine cases in which barium enemas had been administered at the University of California Hospital and found diverticula in 15 of them. A different view of the frequency can be gathered from the fact that among 100 routine autopsies done at the University of California Hospital in the two-year period 1939-1940 on the bodies of patients who had been 35 years of age or older, diverticulosis of the colon was observed in eight cases. It must be remembered that estimates of the incidence based on x-ray studies probably will be inaccurate because a group of patients on whom such studies were carried out probably would contain many studied primarily because of bowel ailments.

The incidence of diverticulitis is much lower. In 177,718 admissions to the New York Hospital, 1933-1944, there were only 201 cases of diverticulitis, a per cent of 0.001 of all admissions.

AGE INCIDENCE

Diverticula of the colon are rarely found in patients below the age of 35. Of 2,139 patients given barium enemas at Kings College Hospital, London, 516 were below the age of 35 and in only three of these were diverticula found, the youngest of the three being 28 years of age.[2] In the present study the ages of the patients ranged from 33 to 82 years and the majority were in the fourth, fifth, and sixth decades.

PATHOGENESIS

Diverticulosis of the colon is rarely congenital. Edwards postulates that "in every hernia two conditions must be present: (1) an area of diminished resistance in the wall of the cavity—this area of weakness through which herniation occurs is provided by the passage of a blood vessel; (2) a pulsion force in the lumen of the cavity—(a) the pressure of the contents, (b) contraction of the muscular coat." The latter factors are interdependent. It is contended that diverticula result from irregular spasm of the bowel musculature maintained over a long period of time, and that hernial orifices, through which the mucous membrane is forced, are provided by the gaps in the musculature through which the blood vessels pass. Constipation apparently does not play a role in the pathogenesis unless spasm of the bowel is also present.[2] There are many references in the literature concerning possible predisposing factors such as overdistention of the bowel, hard coarse fecal material, degenerative changes, and obesity, but the significance of most of these factors is pure conjecture.

ETIOLOGY

The exact cause of diverticulosis of the colon is not known. The pathogenesis has been discussed, but the etiology must await further studies of bowel physiology and factors which cause prolonged bowel spasm. At present it appears that long continued

* This study was made while the author was the Lillie Spreckels Wegeforth Fellow in Medicine, University of California Medical School, 1941.

spasm of the bowel is an important factor in the cause of diverticulosis of the colon.

CLINICAL MANIFESTATIONS

Uncomplicated diverticulosis of the colon is asymptomatic. Not until diverticulitis or other complications occur are symptoms noticed. In the group of cases under consideration in this study, 68 of the patients were females and 32 males. In 71 cases diverticulosis alone was present, and in 29 there was also diverticulitis. The criteria for judging the presence of diverticulitis are difficult to establish. In the present study, physical signs of thickening of the colon and tenderness of the colon, tenderness in the left lower abdomen, and positive roentgenologic findings were used in determining the presence or absence of diverticulitis. Undoubtedly diverticulitis was not recognized in some cases where it was present, while in others it was suspected but not present. In 16 cases an impression of diverticulitis of the colon was gained clinically and was established by roentgenographic studies or operation. The diagnosis in the remaining 84 cases was established by other methods. (Table 1.)

TABLE 1.—*Means of Diagnosis of 100 Cases of Diverticula of the Colon at the University of California Hospital*

	No. of Cases
Suspected clinically	16
Not suspected clinically	84
Diagnosis established by:	
Autopsy	9
Barium enema (roentgen ray studies)	66
Surgical operations	6
Gastrointestinal series (roentgen ray studies)	9
Gastrointestinal series and barium enema (roentgen ray studies)	10
Total	100

Symptoms and signs (Table 2) were variable and appeared in many combinations. Pain in the lower abdomen was usually colic-like but sometimes steady. Weight loss was a rather common finding and in many instances led the clinician to suspect carcinoma of the large bowel. Diarrhea and constipation were present intermittently in 15 cases. Blood in the stool was a common finding—present in 26 of the 29 cases of diverticulitis. Young and Young noted blood in the stool in 26 per cent of 84 cases of diverticulitis of the colon.[7]

It is noteworthy that the sigmoidoscopic examinations performed in 22 cases disclosed abnormal findings in only two: in one, obstruction of the sigmoid colon, and in the other, injection of the mucosa. In expert hands, however, sigmoidoscopy is apparently a much more accurate diagnostic aid. Jackman and Pumphrey [3] reported on 400 patients with diverticula of the colon. In 242 cases both sigmoidoscopic and roentgenographic studies of the colon were done. A sufficient variation from the normal was observed on proctoscopic examination to suggest the presence of diverticula of the sigmoid in 160 or 66.1 per cent.

TABLE 2.—*Symptoms and Signs Observed in 100 Cases of Diverticula of the Colon at the University of California Hospital*

	No. of Cases
Constipation	36
Pain and tenderness, left lower quadrant	30
Blood in stools	26
Diarrhea	21
Intermittent diarrhea and constipation	15
Weight loss	11
Mucus in stool	9
Mass, left lower quadrant	4
Mass, right lower quadrant	1
Mass, rectum	1
Mass, adnexa	1
Fever	1

TABLE 3.—*Location of Diverticula in 100 Cases at the University of California Hospital*

	No. of Cases
Sigmoid	45
Sigmoid and descending colon	16
Entire colon	16
Descending colon	14
Sigmoid and ascending colon	3
Undetermined	3
Transverse colon	2
Ascending colon	1

Roentgenographic studies later revealed diverticula. In the opinion of these authors the most valuable single proctoscopic finding, aside from actually seeing the diverticula, is the presence of sacculations.

There is no doubt that roentgenographic study of the colon, by means of the barium enema, is the most efficient method for demonstrating diverticula of the colon.

Diverticula are practically always multiple and are most numerous in the sigmoid colon.[4] They become less numerous toward the cecum. The rectum is not often involved. The location of the diverticula in the 100 cases under consideration is described in Table 3. In these cases diverticula were present in other parts of the bowel. In one of these a duodenal diverticulum was present; in a second case a diverticulum of the stomach, a diverticulum of the duodenum, at least three diverticula of the terminal ileum, as well as numerous diverticula of the entire colon were present; and in a third case, multiple diverticula of the colon and esophagus were found.

COMPLICATIONS

The most important complications of diverticulitis are obstruction, acute perforation, abscess formation, rupture of an abscess with subsequent localized or generalized peritonitis, and adhesions and strictures of segments of the colon. The complications which occurred in this group of cases are listed in Table 4. Diverticulosis or diverticulitis apparently do not predispose to cancer. In Kocour's study of 7,000 autopsies, the incidence of cancer of the colon was not greater in the group with diverticula of the colon than in the entire group studied. Carcinoma of the colon was a coincidental finding in two of the 100 cases in the present study.

TABLE 4.—*Complications in 100 Cases of Diverticula of the Colon at the University of California Hospital*

	No. of Cases
Partial obstruction of large bowel	6
Sigmoid adhesions	2
Rectal stricture	1
Volvulus of sigmoid	1
Pelvic abscess	1

PATHOLOGY

The diverticula are composed of a herniation of the mucus membrane and submucosa through a gap in the musculature of the bowel wall. The musculature of the bowel is continued into the wall of the diverticulum but becomes progressively thinner and atrophic toward the fundus of the sac.[1,2] There is no evidence that generalized atrophy of the musculature of the bowel occurs.[2]

TREATMENT

It is not the purpose of this paper to discuss extensively the treatment of diverticulosis and diverticulitis of the colon. The aim in the management of patients with diverticulosis is to prevent diverticulitis and other complications. Supposed factors which may predispose to diverticulitis were mentioned earlier, but there is no good reason to believe that avoidance of these faults would really prevent diverticulitis. In the interest of general health, however, it seems reasonable to attempt the cultivation of regular bowel habits. The treatment of diverticulitis requires bed rest. A low residue diet seems reasonable. Local heat to the abdominal wall and heat in the form of warm enemas may relieve pain. Tincture of belladona or phenobarbital or both should be given in full therapeutic doses in an effort to relieve spasm. Use of repeated small instillations of barium (30 gm. in 90 cc. warm water) followed by a cleansing enema has been reported to give good results.[7] Barium by mouth in similar doses also has been reported to give good results.

The indications for surgery are few and largely limited to the treatment of complications. These are in general: (1) acute perforation with spreading peritonitis, (2) inability to differentiate between cancer and diverticulitis, (3) fistula formation, and (4) chronic obstruction. Whether or not to operate on a patient with acute non-perforating diverticulitis is a most difficult decision to make. Surgical treatment carries with it a high mortality. In one report surgical procedures were carried out in 21 patients with acute diverticulitis, with a mortality of 19 per cent.[7] In another study 51 cases required operation. Nine deaths occurred giving a mortality of 17.6 per cent.[5] The merits of medical versus surgical treatment of acute diverticulitis must await further clinical studies.

SUMMARY

1. A brief outline of the subject of diverticulosis and diverticulitis of the colon has been given.

2. The findings in 71 cases of diverticulosis of the colon and 29 cases of diverticulitis have been presented.

3. Constipation was present in 36 cases.

4. Pain and tenderness in the left lower quadrant of the abdomen, blood in the stools, diarrhea, and intermittent diarrhea and constipation were the most constant clinical features of those patients with diverticulitis.

5. Diverticula are located most frequently in the sigmoid colon.

6. Partial obstruction of the large bowel was the most common complication in this group of cases.

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REFERENCES

1. Delafield, F., and Prudden, T. M., revised by Wood, F. C.: A textbook of pathology. 16th edition. William Wood and Company, New York City.

2. Edwards, H. C.: Diverticula and diverticulitis of the intestine, John Wright and Sons, Ltd., Bristol, 1939.

3. Jackman, R. J. and Pumphrey, R. E.: The significance of proctoscopic findings in the diagnosis of diverticula of the colon, Proc. Mayo Clinic, 14:596 (Sept. 20), 1939.

4. Kocour, E. J.: Diverticulosis of the colon, Am. J. of Surg., 37:433 (Sept.), 1937.

5. Martin, K. A. and Adsit, C. G.: Diverticulosis and diverticulitis, Med. Clin. of North Am., 639, New York number, 1945.

6. Miller, E. R.: Personal communication.

7. Young, E. L. and Young, E. L. III: Diverticulitis of the colon, New Eng. J. of Med., 230:233 (Jan. 13), 1944.

Surgical Treatment of the Horseshoe Kidney

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SURGICAL treatment of the horseshoe (fused) kidney embraces a wide field of renal operations and for that reason is of great interest and importance. The development of this treatment can be divided into three periods, the first beginning with the recorded autopsy findings of De Carpi, Morgagni, and Rayer in the 15th and 18th centuries, the second beginning in the late 19th Century with the accidental discovery of the anomaly during exploratory abdominal surgery (no attempt being made to correct the condition), and the third period being ushered in by such men as Rovsing, Newman, Israel, Braun, and others who successfully performed nephrolithotomy, pyelolithotomy, and heminephrectomy. The conservative operation of symphysiotomy and nephropexy for "horseshoe kidney disease" may be said to be a development of the 20th Century following the introduction of cystoscopy, urography, and renal functional tests which have made pre-operative diagnosis and surgical management more accurate and successful.

Surgical advances in the cure of horseshoe kidney have kept pace with improved diagnoses until today the "fused kidney patient" can be offered a life span almost equal to that of persons having two normal kidneys. The latter statement would be true especially if correction of the anomaly could be undertaken before infection, calculi, and associated diseases have developed. Early correct diagnosis in children and young adults is the way to improve our end results. After infection has been superimposed upon the anomalous fused kidney, urinary stasis, chronic pyelonephritis, and recurring calculi are exceedingly difficult to eradicate, even with modern surgery and the so-called "miracle drugs."

SURGICAL APPROACH

The extraperitoneal oblique lumbo-abdominal approach to operations upon the fused kidney is advocated by most modern writers. However, the transperitoneal incision has been used by some urologists, and by quite a number of general surgeons in the course of abdominal exploration for unexplained masses. Familiarity with both types of wide exposure is necessary to successful correction of these anomalies and their concomitant diseases.

In view of the fact that verification of the diagnosis of horseshoe kidney can be made only by actual visualization of the isthmus (palpation alone of a fibrous or parenchymatous bridge is not reliable), the classical oblique lumbo-abdominal incision must be extended downward and inward in order to expose the retroperitoneal structures at the level of the third and fourth lumbar vertebrae, the usual site of a horseshoe isthmus connecting the lower poles. This was surprisingly easy in the two cases in which the author has done the operation. The left oblique approach is strongly recommended if there is a choice as to side in symphysiotomy, because there is less danger of injury to the thick abdominal aorta on the left side than to the vena cava on the right. Walters and Priestley[17] have called attention to the possibility of fused kidney if difficulty in freeing either renal pole is encountered during the course of any surgical procedure upon the kidney.

DIVISION OF THE HORSESHOE ISTHMUS

Symphysiotomy of the fused isthmus may be said to be the principal operative procedure for the cure of "horseshoe kidney disease," which in the opinion of Gutierrez[7] constitutes a typical syndrome. This triad consists of (1) urinary symptoms, (2) indefinite abdominal pain, and (3) gastrointestinal disturbances (most frequently constipation), and will appear in all clinical cases to a greater or lesser degree, unless overshadowed by an associated pathological lesion of one or both halves of the fused kidney, such as pyelonephritis, pyonephrosis, calculus or tumor, rarely tuberculosis. Division of the isthmus, partial resection of the kidney, or total heminephrectomy can be accomplished by various methods or techniques. Essentially they are the same—sharp dissection of the parenchymatous stump and closure of the raw surface to insure complete hemostasis and prevent fistulous formation. The classical V-shaped incision may be used, a pad of fat placed within the wedge, and closure effected with mattress or overlapping sutures of plain, chromic or ribbon catgut. In our experience, the use of chromic No. 1 catgut placed through healthy parenchymatous or capsular tissue and tied snugly but not tightly over pads of fatty and fibrous tissue has proved successful in controlling hemostasis and insuring healing without fistulae. The sacrifice of some healthy parenchymatous tissue at the site of resection or division may be necessary to effect rapid closure and control hemorrhage. Prolonged operative procedures in the patient with "horseshoe kidney disease" carry the real hazard of shock and postoperative anuria due to the high incidence of "nephritis."

Foley[6] in 1945 summarized the results of symphysiotomy in 26 cases, seven of which were his own. The mortality was 3.5 per cent, and good results were recorded in 24 patients. He says that "the symptoms caused by the anomaly horseshoe kidney can be relieved and normal anatomic relations restored by division of the renal isthmus, and nephropexy on one or both sides." At the Mayo Clinic[17] only one of 50 patients had divisions of the isthmus per se, and in Nation's[12] report from the Los Angeles General Hospital, three of nine patients had symphysiotomy, and in one this was followed later by nephrectomy. Eisendrath and his co-workers

Chairman's address read before the Section on Urology at the 76th Annual Session of the California Medical Association, Los Angeles, April 30-May 3, 1947.

found 13 instances of symphysiotomy in 152 patients studied (quoted from Hinman [10]). Division of the isthmus and partial resection of the kidney with nephropexy was carried out in one of the author's own cases, and in the other symphysiotomy was deemed unadvisable because of the bound down position of the kidney and aberrant blood supply. In the case first mentioned, pain in the left kidney area and a feeling of tightness or "pulling" when lying on the right side was relieved completely by resection of the isthmus and left nephropexy. In the latter case, in which symphysiotomy was not done, the patient is free from pain and outwardly well except for chronic pyuria. In general following symphysiotomy with or without nephropexy, the two halves of the horseshoe kidney swing away from the vertebral column to assume a more normal position, and in the experience of most authors the operative procedure has been of great value in the relief of true "horseshoe kidney disease."

NEPHROPEXY

One of the characteristics of fused (horseshoe) kidney is the low position it generally occupies and the complexity of make-up of the renal pedicle (Anson [1]). Four to six sets of vessels are not uncommon, deriving from the aorta, vena cava, iliac, and other blood supply. After division of the isthmus, an adequate blood supply to the separated half must be insured, and often a high nephropexy is out of order. The principal point in fixation of the kidney is to insure proper drainage from the renal pelvis, which in a large percentage of horseshoe kidneys lies anterior. Any type of anchor suture, transfixed to the intercostal, abdominal or lumbospinal muscles, may be used. Gutierrez [8] in addition recommends decapsulation of the upper pole. Drainage is necessary because of the danger of fistulae from the stump of the isthmus. Excellent results have been reported by Foley,[6] Gutierrez,[8] Culp,[3] and others, following symphysiotomy and nephropexy in a gradually increasing number of reported cases (about 25). One must remember that not more than a total of 350 cases of horseshoe kidney have been reported in the world's literature to date, yet its incidence by autopsy record is one in 600 people.

PYELOLITHOTOMY IN HORSESHOE KIDNEY

Lithiasis is by far the most common concomitant lesion of horseshoe kidney, running as high as one-third in the Rathbun [15] series, and over one-half in the Walters-Priestley [17] report. However, Sangree and co-workers [16] found only 12 per cent by autopsy. "The conditions that favor calculi deposition, namely pelvic dilatation, urinary stasis, and some degree of nephritis or pyelitis, are more frequently evident within the anomalous fused than in the normally formed organ" (Farman [5]).

Pelviolithotomy is the operation of choice for the removal of such calculi and in most instances it can be readily performed because of the usual accessible anterior position of the renal pelvis in fused kidney. The only drawback to simple pyelotomy is the frequent multiplicity of stones, their wedge-shaped arrangement (Sangree [16]) and tendency to staghorn formation, making delivery impossible except through additional nephrotomy incision. In one of the author's cases, bilateral pelviolithotomy (not simultaneous) with nephrostomy drainage was done; in the other, nephrolithotomy without nephrostomy drainage. Recovery in the latter case was more rapid and satisfactory than in the former. This brings up the question of drainage in kidney surgery. Deming [4] has said that, ideally speaking, a kidney already damaged by obstruction should have surgical correction without drainage. Patch [13] and Quinby [14] have already recommended such procedures. The author himself believes that the value of nephrostomy drainage in much kidney surgery should be questioned.

HEMINEPHRECTOMY

Heminephrectomy may be said to be the operation of last resort in horseshoe (fused) kidney. Surprisingly, it ranks high in the total number (almost 50 per cent) of cases reported, an indication of late diagnosis with the development of a destructive lesion, or of too radical an attitude on the part of the operating surgeon. Today proper preliminary study will eliminate the necessity for nephrectomy in many cases, with consequent conservation of renal tissue. A good many heminephrectomies have been done transperitoneally by general surgeons in the course of exploratory laparotomy for abdominal masses. There are some technical advantages to the transperitoneal route, although most urological surgeons prefer the oblique lumbo-abdominal extraperitoneal approach because it provides good exposure and eliminates danger of peritonitis.

The difference between nephrectomy of the nonfused and the fused kidney is the necessity in the latter case for treatment of the horseshoe isthmus and ligation of the complex renal pedicle, plus the danger of injury to the great vessels or second ureter. Occasionally the opposite ureter curves across the vertebral column as it did in one of the author's own cases, and in rare instances there will be only one ureter (Sangree's [16] series showed a single ureter in four of 25 cases in which autopsy was done). In heminephrectomy, division of the isthmus usually is done first, the stump carefully sutured and anomalous vessels tied, after which delivery of the kidney and ligation of the true renal pedicle may be relatively easy, as the arrangement of the deep vessels is surprisingly simple according to the dissections of Anson.[1] Drainage and careful wound closure of course is necessary, as in most of these cases infection is present, and the tendency to sinus formation has been reported. Persistent urinary fistulae are uncommon however, as the resected stump tends to atrophy. Hess [9] reported one case in which the connecting bridge was severed with a cautery and left without suture, no urinary fistula following. The mortality rate in isolated case reports runs high—in Rathbun's [15] collected series, 15 per cent in 52 cases of heminephrectomy. Heminephrectomy should

be undertaken only for obstructive calculus pyonephrosis, tumor, or other lesion incompatible with life and health.

PYELOPLASTY IN HORSESHOE KIDNEY

Ideally speaking, repair of the hydronephrotic pelvis often found in fused kidney should be the operation of choice to restore normal drainage and prevent infection and recurrent calculosis. The frequent high insertion of the ureter in an anterior position lends itself to re-implantation to a more normal posterior position at a lower level and, according to Atherton,[2] should be tried in suitable cases. To the author's knowledge there are no reports of results of this operation except one by McGinn and Wickham.[11] In this case the upper right ureter was injured during transperitoneal hemincphrectomy for a Wilm's tumor in a child two years old. Six days later the ureter was re-implanted into the right pelvis and nephrostomy performed. Death occurred two months later from uremia and overwhelming pyelonephritis due to stasis, but in the interim the patient presented a normal health status.

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REFERENCES

1. Anson, B. J., Peck, J. W., and Cauldwell, E. W.: The anatomy of commoner renal anomalies: ectopia and horseshoe kidneys, J. Urol., 47:112 (Feb.), 1942.

2. Atherton, L.: Horseshoe kidney and its clinical management, The South. Surgeon (British), 11:173 (March), 1942.

3. Culp, O. S.: Treatment of horseshoe kidney, Ann. Surg., 119:777 (May), 1944.

4. Deming, C. L.: Modern conception of drainage and irrigation of the urinary tract, J. Urol., 57:49, 1947.

5. Farman, F.: Bilateral nephrolithiasis in horseshoe kidney, J. Urol., 51:447 (May), 1944.

6. Foley, F.: Surgical correction of horseshoe kidney, J.A.M.A., 115:1945 (Dec. 7), 1940.

7. Gutierrez, R.: The clinical management of horseshoe kidney, New York, Paul B. Hoeber, Inc., 1934.

8. Gutierrez, R.: Operative technique for division of renal isthmus in horseshoe kidney, Am. J. Surg., 55:28 (Jan.), 1942.

9. Hess, Elmer: Surgical horseshoe kidney, report of an unusual case, J. Urol., 12:627 (Dec.), 1924.

10. Hinman, F.: The principles and practice of urology, Philadelphia, W. B. Saunders Co., 1935.

11. McGinn, E. J., and Wickham, J. A.: Wilm's tumor in a horseshoe kidney, J. Urol., 56:520 (Nov.), 1946.

12. Nation, E. F.: Horseshoe kidney, a study of thirty-two autopsy and nine surgical cases, J. Urol., 53:762 (June), 1945.

13. Patch, F. S., and Coduere, J. T.: Treatment of hydronephrosis secondary to aberrant renal vessels, Canad. M. A. J., 45:495 (Dec.), 1941.

15. Rathbun, N. P.: Notes on the clinical aspects of horseshoe kidney, J. Urol., 12:611 (Dec.), 1924.

16. Sangree, H., Morgan, D., Klein, T., and Trasi, R.: Horseshoe kidney and the relation of nephritis and calculous formation to anomalous circulation, a report of twenty-five cases, J. Urol., 32:648 (Dec.), 1934.

17. Walters, W., and Priestley, J. B.: Horseshoe kidney, a review of sixty-eight surgical cases, J. Urol., 28:271, 1928.

The Relation of the Private Physician to the Cancer Control Program

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THE private physician in California is officially represented in the cancer control program by the Cancer Commission of the California Medical Association. The Commission was organized by the C.M.A. House of Delegates in 1931 for the purpose of professional education in the diagnosis and treatment of cancer and for increasing cancer facilities in this state. In June, 1945, the C.M.A. Council directed the Commission to cooperate with and participate in the work of the American Cancer Society and to cooperate with public health agencies.

The Cancer Commission has made material progress in its objectives although its work was interrupted during the war years. During the past two years the pioneer Cancer Manual, known as "Cancer Commission Studies," has been revised and publication of chapters began in the May, 1947, number of California Medicine. After publication in serial form the chapters will be bound for a reference manual and will be distributed to the members of the California Medical Association.

The Cancer Commission has established a speakers' panel of more than 100 of the outstanding physicians in California. Speakers on this panel are available to any county medical society in the state to address meetings or for Cancer Clinic days. The Commission has secured the cooperation of the medical schools in Los Angeles and San Francisco in giving refresher courses in cancer to practicing physicians. These refresher courses will be repeated at appropriate intervals and will be available to all members of the California Medical Association.

In the field of cancer facilities the Commission has encouraged the establishment of Consultative Tumor Boards wherever practical in approved general hospitals. The number of Tumor Boards has increased from 20 to 40 during the past year and at least ten other hospital staffs are considering the

establishment of Tumor Boards. The Commission has prepared for publication *Minimum Standards* for Tumor Boards and for Cancer Detection Centers to stimulate and develop these facilities in this state.

During the past two years the Cancer Commission has had the opportunity of working with the American Cancer Society in developing a new state organization and in preparing a policy for the hospitalization of needy cancer patients. During the past year the Commission has cooperated with the State Department of Public Health in assisting the Los Angeles County Medical Society to make a cancer survey. The Commission plans to continue these surveys throughout the state with the cooperation of the Department of Public Health and county medical societies.

The Cancer Commission is more than ever convinced that cancer control is fundamentally the problem of the private physician. As it was well expressed by the American College of Radiology, "The success or failure of any cancer control program is going to depend in a large measure upon the skill, knowledge, and attitude of the attending physician or family doctor." The great majority of cancer patients will first be seen by the family physician and the fate of these patients is primarily in his hands. Whether or not he insists on the immediate diagnosis and whether or not he obtains for his patient prompt and adequate treatment will determine the cure of a large percentage of cancer patients.

The effective program of popular health education by the American Cancer Society and Public Health agencies is bringing an increasing number of cancer patients to physicians while the disease is in the early stage and curable. The recognition and management of these early cases make the private physician the key factor in cancer control.

There is no longer any question that a large percentage of early cancer is curable. (See Table 1.)

TABLE 1.—*Early Cases—Five Year Cures*

Breast—no nodes involved	60-75%	Cheevers
Cervix—Groups I and II*	58%	Healy
Fundus of Uterus	75%	Corscaden
Testicle	42%	Pendergrass
Colon—no nodes	63%	Rankin
Rectum and Colon	53%	Lahey
Limited and no nodes	90%	Lahey
Larynx—cord only	80-85%	Tucker
Nasopharynx	31%	Stuart
Tongue, Tonsil and Gum	25%	Stuart

* Schmitz Classification of Cancer.
Classification I: Cancer localized to the cervix. Cervix freely movable.
Classification II: Cancer confined to the cervix, but uterus has impeded movability.
Reference: Classification of Uterine Cancer, *American Journal of Roentgenology*. 1920, Vol. 7, p. 383.

However, even in early cancer, the curability depends upon immediate diagnosis and prompt, adequate treatment. Any appreciable delay may deprive the patient of 50 per cent of his chance of cure. The period of delay between occurrence of symptoms and adequate treatment is the reason for much of our present mortality.

The lapse of time between the occurrence of initial symptoms and effective treatment (Table 2) is the most discouraging factor in the control of cancer today. This is particularly true in the case of carcinoma of the uterus. In a series of 235 cases at the Jefferson Hospital in Philadelphia, only 12 per cent were in Groups I and II of the Schmitz classification; that is, in a reasonably curable stage. The average duration of carcinoma of the rectum is 12.1 months (Newman), carcinoma of the cervix, 11 months (Macfarland), carcinoma of the breast, nine months (Haagensen).

TABLE 2.—*Duration of Symptoms in Carcinoma Patients Before Treatment*

	6 mo.	1 yr. or more	
Lung	50%		(Hollingsworth)
Body of the Uterus	50%	33%	(Corscaden)
Cervix	49%	28%	(Healy)

AVERAGE DURATION OF SYMPTOMS

Rectum	13.1 months	(Newman)
Cervix	11.0 months	(Macfarland)
Breast	35.4 weeks	(Haagensen)

The tragic note in this period of delay is the fact that most of it is unnecessary. It is largely due to the patient's ignorance, indifference, or fear. However, a significant part of the delay is ascribable to the attending physician. In 27 per cent of Haagensen's breast series at the Presbyterian Hospital in New York the patients said they had been seen by physicians and advised that the lesion was unimportant. In this group of cases the average delay was more than 18 months. Of a series of 83 cases at the Woman's Hospital in Philadelphia, Macfarland reports that in 23 per cent the responsibility for the delay rested upon the family physician. A more serious problem arises in carcinoma of the rectum. Graham reports a series of carcinomas of the rectum in which approximately 50 per cent of the patients received originally an incorrect diagnosis of bleeding piles or colitis. Jones reports from the Massachusetts General Hospital that over 75 per cent of the patients in whom carcinoma of the rectum was diagnosed had been previously treated for hemorrhoids.

The control of cancer mortality depends greatly on eliminating this period of unnecessary delay before treatment is begun. This can be accomplished by the education of the public and the education of the family physician. The program of lay education has advanced well in the last ten years through the publicity of the American Cancer Society, national insurance companies and Public Health agencies. The professional education of the physician has progressed more slowly and is probably the more important of the two. So important is this field of professional education that *one of the national medical societies is urging that all or most of the available federal funds be spent for education of the medical*

profession. Dr. Haagensen stated at the Nineteenth Graduate Fortnight of the New York Academy of Medicine that "For the present our best immediate hope of progress in our attack on cancer is better education of physicians in the use of proved diagnostic methods."

Professional education should be directed both to the importance of detecting early cancer and to the methods of early diagnosis. The physician in general practice sees relatively few cancer patients each year. Often he is not equipped to treat cancer cases. Because of these facts it is difficult to maintain his interest. However, the fate of the cancer patient lies in his hands. Most cancer patients are first seen by their family physician and accept his advice, and this entails a heavy moral responsibility. The private physician can ill afford to overlook early cancer or to delay in attempting to make a prompt diagnosis, or in obtaining adequate treatment for his patient. Education should be directed to the importance of a thorough examination, including biopsy in all suspicious lesions. The physician should suspect cancer in every patient over 40 years of age and should eliminate the possibility of cancer as a cause of presenting symptoms or as a latent lesion. He should be taught that reassurance of a patient or prescription without adequate examination may deprive a cancer patient of 50 per cent of his chance of cure. The physician should be taught the danger of metastases during any delay to "wait and see."

The physician should know what is adequate treatment for cancer. He should know that temporizing with any suspicious lesion may often condemn a patient to an untimely death. He should be taught that superficial cauterization of a skin cancer or a lesion of the cervix without biopsy, treatment of hemorrhoids without a rectal examination, fulguration of a black mole, are never justifiable.

The physician should also be encouraged to realize his personal limitations. Recognition of the lesion may save the patient's life, but if the physician is uncertain about the diagnosis or has not the facilities to arrive at a diagnosis, he should protect his patient and himself by seeking immediate consultation. If the physician has not the facilities or the training to give adequate treatment, he should direct his patient immediately to others who are competent to do so.

The physician in general practice, with careful examination and biopsy, can recognize at least 75 per cent of accessible cancers. If he is cancer-conscious and makes a practice of thoroughly examining suspicious lesions and demands an immediate decision, if he seeks consultations whenever he is in doubt, if he demands adequate treatment of his cancer patients, he can save many lives and prevent untold suffering.

There are five ways in which the practicing physician who is cancer-conscious can play a decisive role in cancer control:

1. By insisting in his own practice on an immediate diagnosis, frequently by biopsy, of every suspicious lesion and by demanding immediate adequate treatment.
2. By insisting on a complete physical examination of his patients over 40 years of age to determine whether or not they have cancer in addition to the lesion for which they are being treated. Too frequently the patient develops a carcinoma of the breast or cervix while under treatment for some unrelated condition.
3. By making a practice of periodic physical examinations to detect early cancer in his own patients. The nationwide publicity of the American Cancer Society is educating the public to expect periodic examinations for the early detection of cancer. Cancer Detection Centers will always cover only a small percentage of the population, and the privilege of cancer detection will always fall to the private physician if he will accept it. Periodic physical examination has been the policy of the American Medical Association for 20 years and the Cancer Commission of the California Medical Association urged this procedure in 1932 as the most effective way of discovering early lesions. *The physician in private practice can best educate his patients to the need of periodic check-up, and these examinations can be performed better in his own private office than elsewhere.* For this reason the Cancer Commission has developed and mailed to every member of the California Medical Association a periodic examination sheet, the use of which would greatly aid in noting early signs and symptoms of cancer. Additional copies of these blanks may be obtained from the office of your State Association.
4. By accepting cases that are referred to him by the county medical society, the American Cancer Society, or public health agencies for examination, diagnosis, or treatment. One of the present difficulties of the public health nurses and volunteer agencies is in not knowing to whom they may send patients with suspicious symptoms with assurance they will be sympathetically received and given a complete physical examination. Each county medical society should have a list of its members who are willing to accept and examine potential cancer patients and it should be prepared to refer inquirers promptly for intelligent medical advice.
5. By educating his own patients in the facts and danger signals of cancer. *Every physician's office should be a cancer information center.* The physician should respect the fear and anxiety of any patient who comes to him inquiring about cancer and he should take the problem seriously. The patient should be led to feel that he can come to his own doctor with intelligent questions or suspicions about cancer and receive an intelligent, sympathetic answer. Very few of these inquirers will be neurotics with cancerophobia. The patient should not feel that he is imposing upon his physician by asking for a periodic

physical examination, but he should be encouraged to come for an annual check-up and to bring to his physician his questions about cancer and his personal problems. Frequently patients will go to a Public Health agency because they feel that their own physician is not interested or would not give them the time for consultation and examination when they have no symptoms or when they are not really sick. The patient will receive lay education from magazines, the radio, and Public Health agencies, but he should be able to take his own problems and fears and those of his family to his private physician and know that he will be given the personal information that he needs.

The physician is the logical source of information in the community. His patients, his associates and his friends will have confidence in his statements regarding the dangers of cancer and the need for immediate action. The voluntary public health agencies should be able to call upon the physician to help them in their educational program on the radio, in the public schools, in clubs and in community meetings, for *his* interest and advice will carry more weight in his community than that of any outside speaker or agency. The interest of the public in the cancer control program will be in direct proportion to the interest and activity of the physicians in their community.

Throughout the state the Cancer Commission is finding that the physician is fearful that the cancer control program will encroach upon the private practice of medicine. There is no foundation for such fear. No matter what facilities may be established, the family physician will continue to see the vast majority of cancer patients in the first instance when they are curable, and he and his colleagues will have the first chance of achieving cure. The family physician will continue to be the determining factor in eliminating the sometimes fatal and always unnecessary delay before adequate treatment. The program of cancer consultation centers and detection centers is so organized in California as to assist and not compete with the practicing physician. Tumor Boards are organized to aid when he needs consultation and his patients are then referred back to him. In the Detection Center the examinee who has suspicious symptoms or any evidence of disease is referred to his own physician for diagnosis and treatment, or he is referred to a physician under the direction of the county medical society. The information centers of the American Cancer Society refer all patients to a physician under a policy established by the county medical society. This program and policy will help the private physician to practice better medicine and will bring to his office patients who would not otherwise seek a physician while their disease is still curable.

The future program in the effective care of cancer patients is no different than the present procedure for the handling of other major diseases. The private physician who is practicing good medicine is continually seeking the advice and assistance of his specialist conferees in major surgical problems, difficult orthopedic cases, or obscure metabolic diseases. In so doing he does not lose his contact with or interest in the patient and he will not do so in the case of his cancer patient.

SUMMARY

The family physician who is cancer conscious is in the best position to find early cancer because the great majority of patients see their family physician first and will accept his direction and advice. Cancer detection by a periodic health examination must be obtained in the physician's office, since cancer detection centers can cover only a small part of the field. The most effective lay education can come from the physician in his contact with his patients and associates. The activities of the voluntary health agencies will receive public support in proportion to his interest and active participation. The program of cancer control will depend largely upon how effectively we can enlist his support. For these reasons the Cancer Commission believes that professional education of the private physician is the greatest immediate need in the Cancer Control Program.

1831 Fourth Avenue.

CASE REPORTS

◀ Penicillin Resistant Cases of Subacute Bacterial Endocarditis Successfully Treated with Massive Dosage ◀ Streptomycin Treatment of Tuberculous Tracheo-Bronchitis ◀ Latent Malaria ◀ Friedreich's Ataxia with Unusual Heart Complications

Penicillin Resistant Cases of Subacute Bacterial Endocarditis Successfully Treated with Massive Dosage

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SUBACUTE bacterial endocarditis caused by Streptococcus viridens can be successfully treated with penicillin.[1] Strains of Streptococcus viridens, however, vary in their resistance to chemotherapeutic agents. A practical measure of the sensitivity of resistance to penicillin is determined by the concentration of penicillin necessary to inhibit the growth of the organism in vitro.

If the growth of a strain of Streptococcus viridens is inhibited in the presence of less than 0.1 unit of penicillin per milliliter of serum, that strain may be said to be "sensitive." [2] If a strain of Streptococcus viridens is not inhibited in a concentration of 0.1 unit of penicillin per milliliter of serum, such a strain may be said to be "non-sensitive."

The majority of patients with subacute bacterial endocarditis, in which Streptococcus viridens is the etiological agent, will yield strains that fall into the "sensitive" group. Penicillin therapy with dosages in the vicinity of 300,000 to 500,000 units per day given in divided intramuscular injections every three hours for a minimum period of eight weeks, has been shown by Bloomfield and co-workers [2] to be adequate for the successful treatment of a "sensitive" strain.

Inadequate dosage of penicillin early in the course of treatment has been shown by Spink and co-workers [4] and others [2] merely to increase the resistance of the strain and, in some instances, to convert a "sensitive" strain to a "non-sensitive" one.

The following is the report of a patient in whom this phenomenon of increasing resistance to penicillin is demonstrated. Later this patient was apparently cured by three million units of penicillin daily for a period of more than ten weeks. A total of 338,510,000 units of penicillin was given this patient during a period of 13 months. To our knowledge this is the largest total amount of penicillin ever administered to a patient with subacute bacterial endocarditis.

REPORT OF CASE

A 25-year-old white man entered the Los Angeles County General Hospital on November 20, 1944. He had been slightly dyspneic on moderate exertion for two months. On November 16 he developed anorexia, general malaise, and a fever of 102 degrees F. On the following day he had a chill, and his temperature rose to 103 degrees F. He noted dull aching pains in his ankles, knees and back. On November 18 and 19 he had a non-productive cough and complained of chest pain, which was independent of respiratory motion.

The patient had had acute rheumatic fever when he was 11 years old. This was characterized by migratory joint pains in both ankles and knees, with fever and generalized weakness. He had no known heart involvement until two months prior to admission, when a private physician had told him he had a "murmur" and advised lighter work. He had had frequent sore throats until his tonsils were removed one year prior to entry. There was no history of congestive heart failure.

Physical Examination: Revealed a well developed and well nourished young man, moderately ill, but in no acute distress. Head and neck were essentially negative. Blood pressure was 150/80 mm. mercury. The apex impulse of the heart was palpated in 5th interspace at the mid-clavicular line; rhythm was regular with a rate of 90. The P2 sound was greater than the A2. There was a Grade II blowing systolic murmur heard at the apex and transmitted to the axilla. A diastolic murmur was not heard. The lungs and abdomen normal. The spleen was not palpable. The skin was clear and there were no petechiae.

Laboratory Findings: The Wassermann was negative. Urinalysis was reported as normal. The value for hemoglobin was 14.1 gm.; erythrocytes numbered 4,250,000 and leukocytes 7,800, with a normal differential. The sedimentation rate was 2 mm. in one hour (Wintrobe). Agglutination tests for typhoid, paratyphoid, typhus, and brucella were negative. Three blood cultures were positive for Streptococcus viridens before treatment was begun. The electrocardiogram was normal except for tendency toward right axis deviation. X-ray showed lung fields to be clear and cardiac enlargement was not noted.

A diagnosis was made of Subacute Bacterial Endocarditis, Probable Mitral Valvulitis. No cardiac enlargement. Class II D.

THERAPEUTIC PROGRAM

Sulfonamides: By December 1, 1944, ten blood cultures had been drawn, the first three of which had already yielded Streptococcus viridens. Sulfadiazine, 4 gm. initially and 1 gm. every four hours was given by mouth. On December 14, 1944, sulfadiazine was discontinued for two reasons. First, the blood cultures remained positive. Second, the tests in vitro showed that the strain of Streptococcus viridens obtained on blood culture was not inhibited in the presence of 20 mg. per cent of sulfanilamide, sulfathiazole or sulfadiazine. At a later date sulfamerazine was available and this was given orally for 30 days without benefit. No sulfonamide complications were manifest.

Artificial fever: Employing a standard variety of fever cabinet, two series of fever treatments were administered. Each series consisted of six fevers with a total of 29 hours above 104 degrees F. During each series a total of 6 gm. of sulfamerazine orally and 260,000 units of penicillin in divided intramuscular injections was administered. These treatments were ineffectual.

Penicillin: Penicillin was a drug of limited availability for civilian purposes in 1944. On December 7, 1944, penicillin was started, using 20,000 units intramuscularly every four hours. Two days later the dosage was diminished to 15,000 units every four hours. After a little more than three

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weeks of therapy, the dosage was further reduced to 10,000 units every four hours intramuscularly.

The blood cultures became negative during the first two weeks of treatment, but were positive soon after the dosage was reduced to 10,000 units every four hours. When it was realized that the dosage was inadequate, the schedule was increased on January 8, 1945, to 20,000 units every four hours. This was the maximum amount available for this patient at that time. On January 11, 1945, it was possible to increase this to 20,000 units every three hours. Despite this increase the blood cultures remained positive. With the increasing availability of penicillin the dosage was again increased on February 14 to 30,000 units every three hours. On March 28, this same dosage was given every two hours. The daily dose totaled 360,000 units. Blood cultures remained positive for Streptococcus viridens. On April 10, the dosage was increased to 40,000 units every two hours. Between May 3 and May 11, it was decided to administer 500,000 units daily by a continuous intravenous drip. This method was abandoned at the end of this period because of an extensive thrombophlebitis that developed in all extremities employed. Heparin was not used. On May 11, the previous schedule of 40,000 units every two hours intramuscularly was resumed and continued without interruption until October 25, 1945. During this period the blood cultures remained positive.

After discussion of the case history with Bloomfield,[3] a daily dosage of three million units was given by continuous intramuscular drip. Blood cultures drawn on the following day were sterile. Over a period of 14 months during which the patient was followed after penicillin therapy was discontinued on January 6, 1946, all blood cultures remained sterile.

Numerous blood samples were examined during the period from October 28 until November 4, 1945, to determine the concentration of penicillin in vivo at different times of the 24-hour period of continuous therapy. At no time was there a concentration under 0.5 units per ml.; the levels ranged from 0.5 U/ml. to 2.0 U/ml.

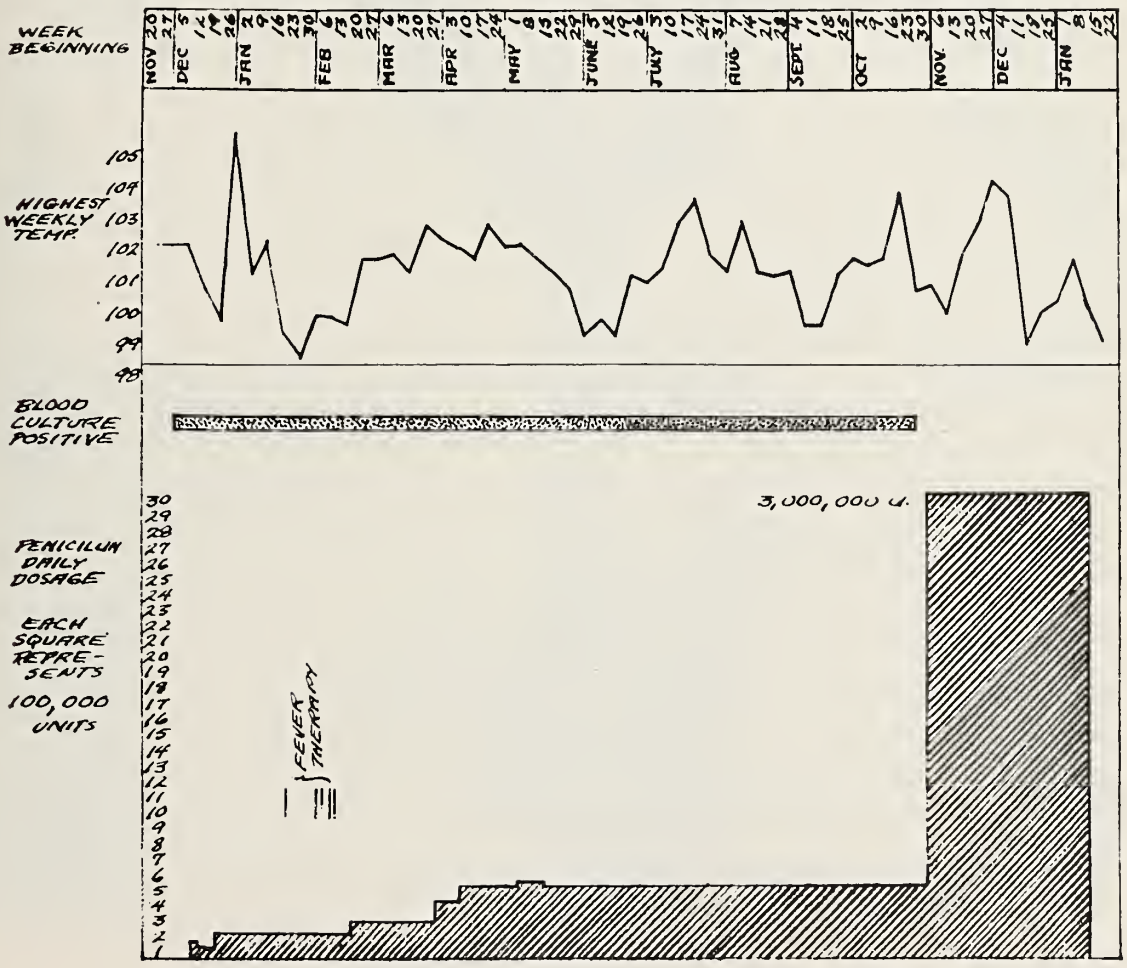
Sensitivity tests were reported as follows: On December 5, 1944, it required 0.2 unit per ml. to inhibit the growth of the streptococcus obtained on culture. On January 9, 1945, it required only 0.025 units per ml. to inhibit growth. After the reduction of penicillin dosage, the resistance of the organism to penicillin increased and the following units per ml. were required to inhibit growth: April 10, 1945, 12.5 units; May 11, 1945, 1.5 units; June 19, 1945, 50 units; July 21, 1945, 0.9 units; and September 7, 1945, 0.4 units. The organism at all times must be classed as "resistant" to penicillin. The resistance, however, increased during inadequate therapy. The wide variations of this test are not explained.

CLINICAL COMPLICATIONS

Anemia developed shortly after admission to the hospital, necessitating frequent blood transfusions.

A persistent fever was present (except for a few days

Chart 1.—Penicillin dosage, blood cultures, and highest weekly temperatures.



from the date of entry November 20, 1944) until three days after penicillin was discontinued on January 6, 1946. Since January 9, 1946, the patient has remained totally afebrile.

Auricular fibrillation developed once four weeks after the patient's entry into the hospital. A normal sinus rhythm was restored after three days of the administration of Cedilanid and small doses of quinidine.

Epistaxis was the most common hemorrhagic phenomenon in this patient. On one occasion the bleeding was so profuse that transfusion with whole blood became necessary. Small retinal hemorrhages were noted frequently. These were associated with transient episodes of blurred vision.

Petechiae were present on many occasions. They appeared in the retinae, conjunctivae and on the extremities.

A probable cerebral embolus with auditory aphasia developed on August 23, 1945. The significant positive findings which supported this diagnosis were (1) an inability to speak, (2) bilateral Babinski signs and hyperactive deep tendon reflexes. The patient was critically ill during this period. Nearly one month was required for the aphasia to clear significantly. Almost one year later the patient still had slight residual aphasia.

Renal colic was present on three distinct occasions. This was accompanied by the presence of red blood cells, white blood cells and a trace of albumin in the urine, which suggested an embolic glomerulo-nephritis, or small renal infarcts.

Thrombophlebitis developed in all veins employed for the continuous intravenous infusion of penicillin.

A sterile abscess developed in the thigh on December 2, 1945, after more than a month of continuous intramuscular drip of three million units of penicillin daily which was administered in 1 liter of normal saline. This abscess was incised and drained. Thick, brown, sterile pus was evacuated. Later both thighs became continuously inflamed until the penicillin was discontinued. The inflammatory process promptly subsided with the discontinuance of the penicillin, and three days after the drug was stopped, the temperature returned to normal levels for the first time in approximately 14 months of treatment.

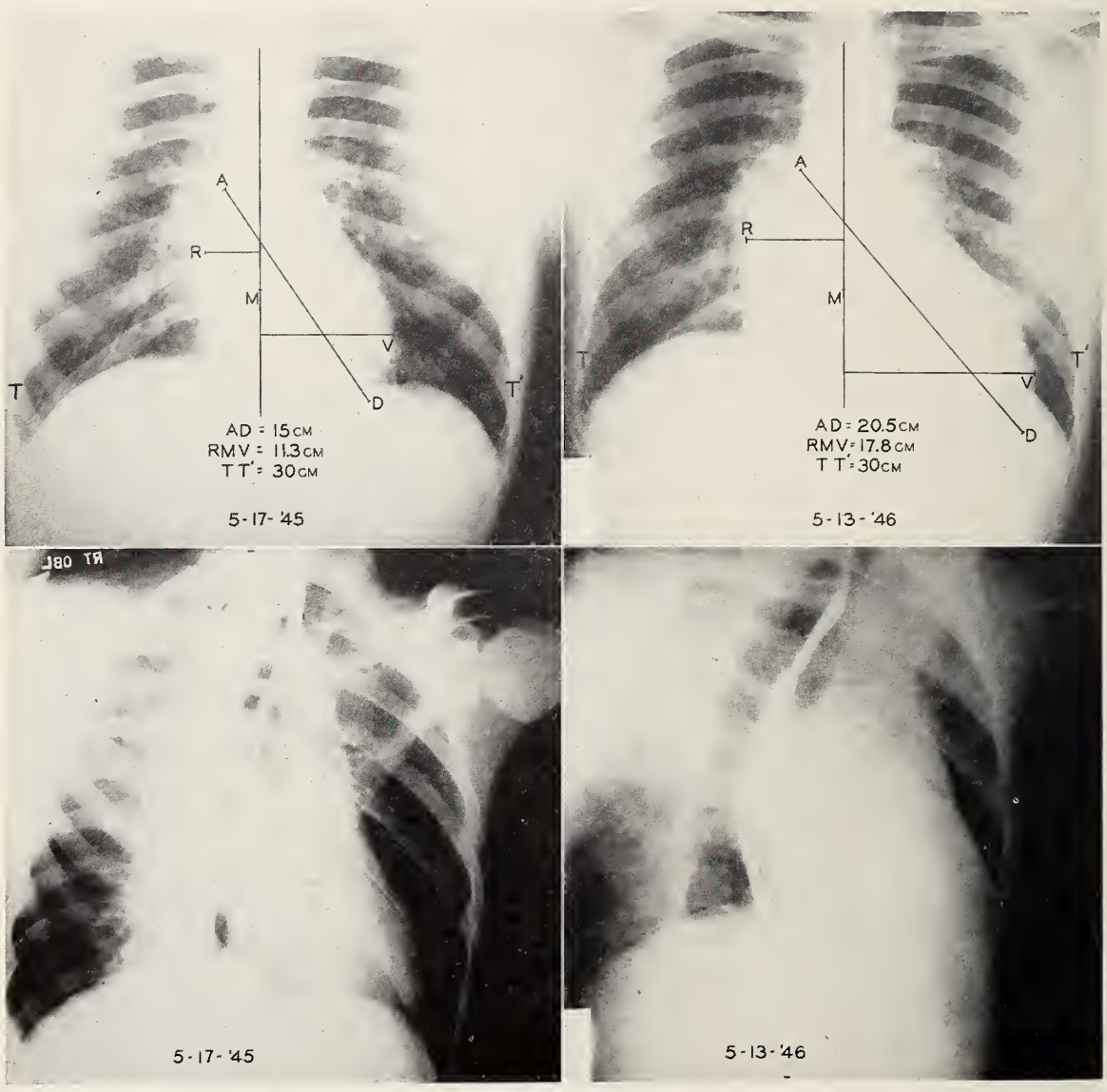


Figure 1.—Films of chest demonstrating cardiac enlargement occurring during treatment. The oblique views show the enlargement of the left auricle with posterior deviation of the esophagus.

Progressive heart disease during and following penicillin therapy was evidenced by increasing cardiac size (Figure 1). As late as May 17, 1945, fluoroscopic examination and films of the heart showed no evidence of cardiac enlargement. On May 13, 1946, less than a year later, the transverse diameter of the heart had increased from 11.3 cm. to 17.8 cm. The cardiothoracic ratio increased from 0.38 to 0.59. The longitudinal diameter of the heart increased from 15 cm. to 20.5 cm. In the right oblique position x-rays indicate the development of a marked posterior deviation of the esophagus which indicates left auricular enlargement.

Electrocardiograms taken before and after treatment show a change from a normal electrocardiogram to one in which there are large notched P waves, right axis deviation, and inverted T waves in leads II and III.

There was a definite change in the character of the heart findings. On the original examination the systolic murmur at the apex was a blowing murmur intensity grade II, and the blood pressure was 150/80. On re-examination on May 10, 1946, the intensity of the systolic murmur at the apex was graded as IV to V. It extended throughout the whole systole and ended with an unusually loud second sound which is unusual at the apex. No diastolic murmurs were heard. The blood pressure on May 10 was 148/106, and the diastolic pressure was consistently over 100 while the systolic pressure rose as high as 168.

Signs of congestive heart failure were thought to be present at the time of the patient's visit to the outpatient clinic in April, 1946, and he was admitted to the General Hospital for a period of ten days. At this time digitalis and ammonium chloride were given. Following this the shortness of breath and swelling of the ankles markedly improved, and the patient continued on the same program. He has returned to work.

CONCLUSIONS

1. A total of 338,510,000 units of penicillin was administered to a patient who had subacute bacterial endocarditis.

2. This patient who had a penicillin resistant strain of Streptococcus viridens and who was not benefited by 480,000 units of penicillin daily for six and one-half months, was apparently cured by three million units of penicillin daily for 72 days.

3. The patient's temperature remained elevated until three days after penicillin was discontinued, although the blood cultures were consistently negative immediately after beginning the three million unit daily dosage.

4. It is important to evaluate the penicillin sensitivity of the strain of Streptococcus viridens in order to properly treat subacute bacterial endocarditis. Extremely large doses of penicillin should be used early in patients who have a penicillin resistant strains of Streptococcus.

5. The dangers of inadequate early therapy are illustrated by relapse, by increased resistance to penicillin and by the rapid progression of the cardiac disease as evidenced by enlargement of the heart and congestive failure.

REFERENCES

1. Bloomfield, Arthur L., Armstrong, Charles D., and Kirby, William M. N.: The treatment of subacute bacterial endocarditis with penicillin, J. Clin. Investigation, 24:251 (May), 1945.

2. Bloomfield, Arthur L., and Halpern, Richard M: The penicillin treatment of subacute bacterial endocarditis, J. A. M. A., 129:1135 (Dec. 22), 1945.

3. Bloomfield, Arthur L.: Personal communication.

4. Spink, W. W., Ferris, V., and Vivino, J. J.: Antibacterial effect of whole blood on strains of staphylococci sensitive and resistant to penicillin, Proc. Soc. Exper. Biol. and Med., 55:210 (March), 1944.

Streptomycin Treatment of Tuberculous Tracheo-Bronchitis

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TUBERCULOUS trachco-bronchitis has become recognized, during the past decade, as a frequent complication of pulmonary tuberculosis, which interferes with respiratory function, leads to spread of the disease, and often precludes the application of collapse measures otherwise indicated. Although many cases heal by resolution or by scarring which may lead to fibrous stenosis with further complications, the usual course is slow and hazardous. Accordingly a new treatment which has led to rapid healing of such lesions in every one of a series of cases so far treated appears worthy of report.

A white male, 26 years of age, found to have moderately advanced pulmonary tuberculosis on a routine x-ray examination, was admitted to a Veterans Administration hospital. Artificial pneumothorax was induced on the left side in July, 1946, and had been maintained since. Bronchoscopic examination in August, 1946, and again in September, 1946, showed ulceration and granulations in the left main stem bronchus more than half occluding its lumen. Streptomycin treatment was begun on September 5, 1946, the day after the second bronchoscopy, and was continued for a period of three months. Two grams of streptomycin was given in six intramuscular injections, four hours apart, every day, and 0.5 gm. of streptomycin was given daily by aerosol inhalation every two hours during the daytime.

Repeated bronchoscopic examination showed remarkably rapid subsidence of the lesion, with disappearance of the obstructing granulations and restoration of apparently normal mucous membrane in an only slightly narrowed bronchus in only six weeks. Repeated bronchoscopic examinations in the six months since cessation of the treatment have shown no evidence of recurrence. The patient's sputum has become negative and there has been marked clinical improvement, both physically and psychically, although rest and the pneumothorax regimen are being continued. During the second month of treatment the patient was considerably disturbed by symptoms of vestibular dysfunction, and since then has shown a complete absence of response to caloric tests. He has adjusted well, however, and shows good compensation by the use of other senses.

Twenty other patients, treated with streptomycin for periods of from one week to three months have all shown the same rapid healing of open ulcerative or granulating tuberculous lesions of the trachea and bronchi. Recently much smaller doses without aerosol have yielded similar success with no vestibular dysfunction.

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Latent Malaria

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RECENTLY there have been frequent warnings of the need for physicians to be more aware of those diseases not commonly seen in temperate climates but likely to be prevalent now by virtue of the return of those in the armed forces who have served overseas. No one will deny that malaria must be included in this group. London and others,[1] in a study of the delayed primary attack of vivax malaria, found in 101 cases a variation of onset of 3 to 104 (mean 41) days after cessation of suppressive medication. Most and Hayman[2] have described uncommon clinical variations in malaria and stated that the delayed primary attack may occur in a few individuals as long as a year after the cessation of

suppressive medication. Scheifley [3] reported a case occurring 12 months or more following the discontinuance of atabrine, and stated that he had been unable to find any reports of cases in which the clinical attack occurred more than eight months after exposure.

The following case, in which the delayed primary attack occurred 16 months after cessation of suppressive doses of atabrine, is reported primarily to call attention to the long time that may elapse before the onset of the first attack of clinically recognizable malaria.

CASE REPORT

A 28 year old male was admitted to Sutter Hospital, Sacramento, January 24, 1947, complaining of severe headache and fever of six days' duration. He had become ill after returning to his home from a skiing trip of about six hours' duration at 6,000 feet elevation. Headache, intermittent fever, and some general malaise were the only complaints. The following day he felt well enough to work, but developed fever and a chill and returned home. He was first seen the third day of the illness and nothing could be found on examination to account for the complaints. The next day he felt no different. Erythrocyte count and hemoglobin value were normal. The leukocyte count was 2,050, with a normal distribution. Sedimentation rate (Wintrobe) was 7.0 mm. in one hour. Except for 1 plus proteinuria, the urine was normal. The following day the leukocyte count was 9,000, with little change in the differential count.

The patient had served in the South Pacific from May, 1942, to September, 1945, and during this time had taken atabrine for suppressive purposes. He stopped all atabrine September 22, 1945, when he sailed for home. While in the Army he had had pneumonitis in Hawaii in 1942, mumps in Australia in 1943, and mild dysentery in New Guinea in 1944. He had never had any illness which even remotely suggested malaria.

Malaria was considered but in view of what seemed an unreasonably long latent period it was felt the patient was probably suffering from a virus infection of some sort, and hospitalization was advised. Repeated physical examinations were negative, except that the patient looked ill while he had fever, and seemed well when he did not. At no time could the spleen be felt. Whereas fever at first had been irregular, it soon became evident that chill and fever were coming fairly regularly every other day.

On the third day after admission blood smears taken three hours before another chill showed many trophozoites of the vivax type. Atabrine was begun at once, and the patient had one more chill of less severity two days later. The day after the trophozoites were found, more parasites were seen in a smear. This time most of them were in the ring stage. The patient had shown repeatedly a leukopenia (the leukocyte count having risen to 9,000 on one occasion only) and relative monocytosis; and at no time was there significant anemia.

The patient took a total of 2.8 gm. of atabrine, and was then told to take 0.6 gm. of quinine daily for eight weeks. However, because of severe hyperidrosis without fever, he discontinued the quinine after one week. He has not yet had a second attack.

COMMENT

There seems no reasonable doubt that this patient's attack of malaria came about as a result of inoculation in the South Pacific sometime (or repeatedly) in the period 1942-1945. Between the time of cessation of suppressive medication and the onset of symptoms there was a quiescent period of 16 months. Although the author knows of no reported latent period of this duration, others have indicated that even longer periods may not be rare. Walker [5] has knowledge of several cases in which overt vivax malaria did not develop until 12 to 15 months after discontinuance of suppressive atabrine, and Turner [4] has seen two cases in which clinical malaria developed two years after the patients had left the Pacific.

Change of altitude to a higher level has been found to precipitate an acute attack of malaria in a person seeded with the organism. The patient reported above developed the first attack a matter of hours after return from an elevation of 6,000 feet. Earlier in the day he had been practically at sea level. This was not, however, his first such trip. He had, in fact, made several skiing trips, and on one occasion had remained a week at high altitude. The factors responsible for precipitating the attack at this particular time remain unknown.

SUMMARY

A case of vivax malaria is reported in which there was a latent period of 16 months between the cessation of suppressive atabrine medication and the onset of the primary attack of the disease. Malaria must be considered in any patient with a febrile illness of unexplained cause.

REFERENCES

1. London, I. M., Kane, C. A., Schroeder, E. F., and Most, H.: The delayed primary attack of vivax malaria. New Eng. J. Med., 235:406-410 (Sept. 19), 1946.
2. Most, H. and Hayman, J. M.: Uncommon clinical manifestations of vivax malaria. J. A. M. A., 130:480-484 (Feb. 23), 1946.
3. Scheifley, C. H.: Malaria: A note on its latency and report of a case. Proc. Staff Meet. Mayo Clinic, 22:49-52 (Feb. 5), 1947.
4. Turner, Roy H.: Personal communication.
5. Walker, A. J.: Personal communication.

Friedreich's Ataxia with Unusual Heart Complications

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Of all the progressive diseases with a poor prognosis, Friedreich's Ataxia is one of the rarest. It is a familial, heredodegenerative disease [1] which occurs in children and has a fairly definite clinical picture and course. The characteristic symptom of the disease is ataxia. The patient gradually begins to walk on a broad base, has difficulty in climbing stairs, and stumbles or falls. The speech becomes slow, unclear and dysarthric, or there may be scanning and syllabilization. In some cases, the speech difficulty is the first symptom to attract attention. There are sensory disturbances of the lower extremity with impairment of position and vibratory sensation. Nystagmus is present, and clubfoot with marked arching of the foot produces chronic hyperextension of the big toe. Some cases show scoliosis in the thoracic area. The deep reflexes are usually absent but the Babinski is positive. Some patients show ataxic breathing, and often when the patient is seated in a wheelchair, the head bobs from side to side. Mentality is usually intact but it may be retarded.

Study of members of a family discloses the existence of incomplete or mono-symptomatic types; that is, there may be arched feet or nystagmus alone, or absence of reflexes.[2] Other symptoms in individuals are not merely abortive or atypical, but intermediate between symptoms of the disease and those of other diseases. Patients who have the disease gravitate to homes for the incurables or hospitals for chronic

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diseases, some living for 30 or 40 years after the onset in childhood. The disease is centered in the spinal cord [3] with degeneration of the pyramidal and dorsal spinocerebellar tracts. This combined degeneration of the posterior and lateral columns [4] becomes less marked as the tracts are traced upward. The cord is smaller than normal. The cerebellum shows a wide variety of changes, but in general there is degeneration of the ganglion cells.

The disease usually begins at the age of seven or eight, although sometimes after puberty. Brothers and sisters may be involved, and it may occur in many generations. The disease progresses inexorably until the patients are bedridden.

During the past year, the author has seen and examined three cases of Friedreich's Ataxia. In the progress of one case, the patient developed paroxysmal auricular tachycardia, which was resistant to treatment. Periodically the pulse rate would be increased only to revert to a lower rate after treatment. During one of the attacks of tachycardia, congestive heart failure developed and the patient died. While investigating the frequency of heart complications in Friedreich's Ataxia, the author came across the records of two sisters who were afflicted with the disease, one of whom developed a heart complication. Both were treated in this hospital. One died suddenly at the age of 27 and autopsy revealed an acute myocardial infarction.

CASE NO. 1

The patient, a woman 27 years old, entered the hospital on November 24, 1944. Interview elicited that she had first noticed trouble with writing at nine years of age. At age 12, she noted difficulty in walking. She had malaria at the age of 11 and was in bed for one year at that time. She was supposed to have a "leakage of the heart" which had begun before the age of nine and had taken medicine for this "heart trouble" while in grade school. She had had measles, chickenpox and whooping cough. Menses began at 14. The rest of the past history was negative.

Examination revealed a well-nourished young woman with a scoliokyphosis. There was bilateral exophthalmos. The heart was enlarged and a systolic murmur was heard over the precordium. The deep reflexes were absent in both lower extremities and the Babinski was positive. Nystagmus was present. Sphincter control was intact. The tuberculin test was negative. A diagnosis of Friedreich's Ataxia was made.

Occasional spells of vomiting were easily controlled. On March 20, 1945, severe dyspnea developed. The pulse was irregular, and the neck veins were distended. Upon administration of digitalis the dyspnea disappeared.

There was no further change in the condition until August 27, 1945, when one of the resident physicians noted a change in the patient's personality. Previously a very pleasant person, the patient now was constantly finding fault with everyone and was unkind to attendants. The pulse at this time was found to be irregular. On October 19, 1945, a severe pain in the right lower quadrant of the abdomen developed, without vomiting. As there had been no bowel movements for four days, an enema was given and the abdominal pain stopped. On October 27 there was a similar attack, but with vomiting, and although the emesis stopped following an enema, the temperature at this time was 101.2 F.

At 4 a.m. on October 28, the patient suddenly became very cyanotic and no pulse could be felt. Respirations were shallow and rapid and the heart sounds barely audible. The patient died at 8:30 a.m.

Autopsy revealed the following: The right lung weighed 450 grams and the left lung 300 grams. Both showed acute edema. The heart weighed 425 grams. The left ventricle was 15 mm. thick and the right ventricle 8 mm. thick. The tricuspid and pulmonic valves were normal. In the mitral valve there was some evidence of scarring of the leaflets and a slight nodular thickening at the bases, but no ulcerations or vegetations. The aortic valve was normal, and the ascending aorta showed a minimal amount of atherosclerosis. A small, friable blood clot was seen emerging from the left coronary ostium. With some difficulty it was removed, leaving a string-like thrombus traced to the bifurcation of the left coronary artery. When the heart muscle was dissected, an area at the apex was pale and blanched in comparison with the remainder of the ventricular wall. There was also some old scarring of the myocardium. The rest of the findings were negative except for a cyst of the right ovary.

Anatomical diagnoses: Acute pulmonary congestion and edema; cyst of the right ovary. On the basis of the heart findings, the autopsy surgeon added a probable coronary thrombosis to the anatomical diagnoses.

CASE NO. 2

A 21-year-old male patient who entered this hospital on October 31, 1944, had not walked for nine years. Past history disclosed that when examined at the University of California Hospital in March, 1935, at the age of 12, he had stated that the infirmity had been present for four years. He was markedly ataxic then, could barely walk, and had difficulty in speaking. A diagnosis of Friedreich's Ataxia was made and he was discharged from the University of California Hospital with instructions to report to the outpatient clinic there, which he did but once, on June 20, 1935. Thereafter the patient apparently had care from private physicians until his admission to this hospital.

At this time he could not walk, could barely sit up alone, spoke with a stuttering voice, but was euphoric. The deep reflexes were lost and there was also loss of bladder control. Routine care was given and the patient was up in a wheel chair daily. There was no change in condition for the next two years. He remained euphoric and often asked permission to try to walk with crutches or in a walker, but marked ataxia prevented this. When first seen by the author, the patient was still cheerful and hopeful that some treatment would be found to cure his condition so that he could start the study of medicine, which he yearned to do.

The family history was negative. There was no evidence of the disease in two younger sisters. Ataxic breathing was marked and sometimes the patient would scream or cry out in a loud voice for no apparent cause.

On October 4, 1946, abdominal pain developed. There had been no bowel movements for several days. This was remedied by enemas. Five days later, severe dyspnea developed, with a pulse rate of 190 which was lowered to 160 by ocular pressure. A tentative diagnosis of paroxysmal auricular tachycardia was made and was later confirmed by an electrocardiogram. The next day, when pressure over the eyeballs and carotid sinus failed to affect the pulse rate, which then was 180, a rapid course of intravenous digitalization was started.

Between this period and the time of death from congestive failure on December 18, 1946, the course was one marked by auricular fibrillation, bouts of regular rhythm, irregular respiration with variable response to therapy with digitalis and quinidine.

At autopsy, the meninges were congested, but the brain looked grossly normal. There was 300 cc. of fluid in each pleural sac. The left lung was edematous. The middle and lower lobes of the right lung were atelectatic and the upper lobe was edematous. The heart was enlarged and weighed 400 grams. The pericardium contained 120 cc. of pale yellow fluid. All valves, the aorta, and the coronary arteries appeared normal. The internal organs showed passive congestion.

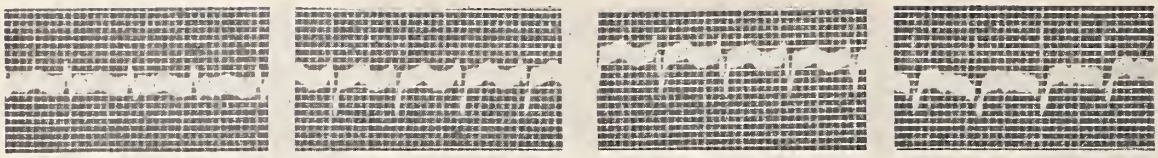


Figure 1. Case 2.—Standard leads October 10, 1946. Paroxysmal auricular tachycardia. Rate 180. Left axis deviation.

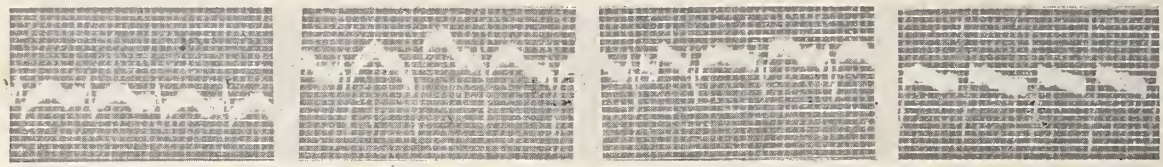


Figure 2. Case 2.—December 8, 1946. Rate 180. Left axis deviation. Evidence of myocardial damage present.

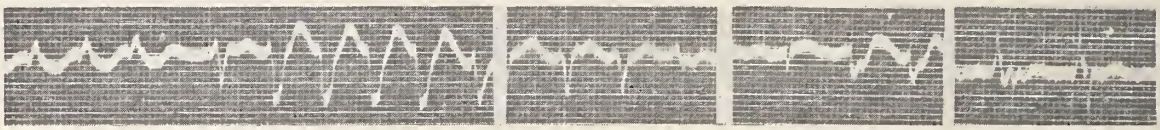


Figure 3. Case 2.—December 10, 1946. Note change of rate from 110 to 160. Patient on quinidine. In lead I note alternation of cycle length as described by Barker et al. and also abrupt change to paroxysmal ventricular tachycardia. Diffuse myocardial damage.

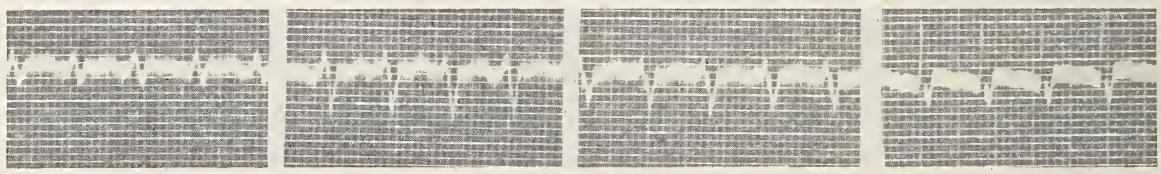


Figure 4. Case 2.—December 14, 1946. Rate 180. Left axis deviation. Reoccurrence of tachycardia. Note resemblance to Figure 1.

Anatomical diagnoses: Cardiac hypertrophy; atelectasis, right middle and lower lobes; pleural effusion, bilateral; pulmonary edema, bilateral. On microscopic examination, the liver showed severe chronic passive congestion. There was marked cardiac hypertrophy and diffuse interstitial fibrosis; the lungs showed chronic passive congestion and purulent lobular pneumonia. Sections of the cerebrum, cerebellum and spinal cord were not remarkable. In the medulla, the olivary nuclei contained numerous nerve cells with large, relatively clear vacuoles distorting the shape of the cells.

COMMENT

Two cases of Friedreich's Ataxia are reported. This condition, although rare, can usually be seen in hospitals for chronic diseases or in university hospitals which have a large turnover of patients. Diagnosis of a fully-developed case is not difficult, especially since in some cases there is a history of other members of the family being similarly affected. Difficulty in diagnosis comes in those cases which are not full blown, but are either incomplete or monosymptomatic, or abortive and atypical.

Patients with this disease may live for many years. However, cardiac complications may set in at an early age with death resulting. In Case No. 1 the outcome was a myocardial infarction in a woman 27 years of age, which is unusual. In Case No. 2, congestive heart failure developed following paroxysmal tachycardia in a man of 23 years of age. This patient died also.

Friedreich's Ataxia is a slowly progressive chronic disease which usually begins in childhood. Because very little is known of the causes, the physician can add very little in the way of treatment.

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REFERENCES

1. Wechsler, I. S.: Textbook of clinical neurology, W. B. Saunders Co., Philadelphia, 1944, pp. 122-124.

2. Wilson, S. A. K.: Neurology, Williams & Wilkins Co., Baltimore, 1940, pp. 943-956.

3. Moore, R. A.: Textbook of pathology, W. B. Saunders Co., Philadelphia, 1944, pp. 1182-83.

4. Boyd, W.: Pathology of internal diseases, Lea & Febiger, Philadelphia, 1945, pp. 786-788.

CLINICAL SYMPOSIUM

Prepared under the direction of Edgar Wayburn, M.D., *San Francisco*, and Clarence J. Berne, M.D., *Los Angeles*

Treatment of Hypertension

Medical Aspects:

Walter Beckh, M.D.*

Surgical Aspects:

Albert C. Daniels, M.D.†

Dr. Beckh: In order to treat the hypertensive patient intelligently, a diagnosis of the type of hypertension is essential. In the determination of the cause of hypertension, there are numerous steps that must be taken to arrive at the answer.

Table 1.—*Steps to Be Taken in Determining the Cause of Hypertension*

History, physical examination, blood count, urinalysis, sedimentation rate.
Non-protein nitrogen
Urinary sediment count (Addis)
Dilution-concentration test
Phenolsulphonephthalein test
Chest x-ray
Pyelography, intravenous and/or retrograde
Histamine test

Not necessarily all the steps in Table 1 will need to be taken in every case. The dilution-concentration test is one of the most valuable we have, and it is about the cheapest, too, whether we use it in the Fishberg, Mosenthal or Volhard modification. If the specific gravity on concentration is considerably lower than normal and during the "diluting" period its values vary much or are abnormally low, we know that we are dealing with far advanced bilateral kidney disease.

The phenolsulfonephthalein test is useful and cheap. Anyone using the PSP test should adopt the modification of Halsted and Chapman, who pointed out that 15 and 30 minute excretion time measurements in many cases show evidence of kidney damage not shown in the one and two hour method. One cubic centimeter of the dye should be injected intravenously, with the bladder emptied and following the ingestion of about a quart of water. Normal values are 35 per cent and 18 per cent dye excreted within 15 and 30 minutes respectively.

An x-ray picture of the chest should be taken for information as to the size of the heart and because it tells about coarctation of the aorta which shows itself in the scalloping of the ribs. In a physical examination on a new patient with hypertension, the blood pressure should always be taken in the thigh as well as the arm. Usually the blood pressure readings in one thigh are sufficient to rule in or out coarctation of the aorta. Normally, the blood pressure in the thigh is 30 to 40 mm. higher than in the arm, but if the blood pressure in the thigh is much lower than normal or is absent, then one knows immediately that the patient very probably has coarctation of the aorta.

Pyelography may give us a great deal of information. In cases in which intravenous pyelography is not satisfactory through lack of concentration of the dye, retrograde pyelography may be valuable.

As to the histamine and other related tests, the one most commonly used is the intravenous histamine test first proposed by Kvale and Roth at the Mayo Clinic. In non-pheochromocytoma patients, normal and hypertensive, there is no great rise of the blood pressure on intravenous injection of 0.025-0.05 mg. of histamine base, but with pheochromocytomas there is an immediate and sharp rise. This appears to be an excellent test, but it has not been done extensively enough to provide knowledge of the percentage of failures. Another trouble with it is that at times there may be a hesitation on the part of the physician to induce a still further pressure elevation, even though only temporarily, in a person whose blood pressure is already at dangerous levels, lest a cerebral vascular damage occur during the test. The air injection method by which a tumor of an adrenal may at times be visualized has been abandoned due to the great danger of inducing fatal air embolism. More recently, the tetraethyl ammonium (Etamon) test has been used, but it is probably not satisfactory for this purpose.

Let us now turn to the methods of treatment. Before becoming more specific I would like to emphasize that numerous factors affect the particular considerations in each case, such as the age of the patient, the duration of the hypertension, the severity of the blood pressure elevation, the presence or absence of symptoms, overweight, and heredity. Essential hypertension in the very young age group is not usual, and the psychogenic factors which can be so important later on in life are at a minimum during this period. A patient above the age of 55 or 60 has reached a period in life at which for social and other reasons a solution of the problem is not nearly so important as in younger years. In patients of this higher age group, some of our therapeutic procedures, such as sympathectomy, are thought to be contraindicated except for symptomatic relief. I shall therefore confine my remarks to a large degree to patients in early and middle age.

Taken from Postgraduate Review Course, Stanford University School of Medicine, September 11, 1947.

* Assistant Clinical Professor of Medicine.

† Clinical Instructor in Surgery.

TABLE 2.—*Methods of Therapy in Use at Present*

Medical	*Surgical*
General—rest, relief from worry, etc.	Obliteration of coarctation of aorta
Discontinuance of tobacco	Unilateral nephrectomy
Sedatives	Sympathectomy
Vasodilators	
Diet	
Vitamin A	
Rutin	
Tetraethyl ammonium salts	
Thiocyanates	

I am not going to dwell on the first item in Table 2. It is well to bring out the need for discontinuing tobacco. In some people tobacco induces peripheral vasoconstriction and thereby may cause elevation of blood pressure over that already existing. Since improvement may be due to the summation of several things which the patient does upon the physician's advice, it is important that he follow each one; the discontinuance of tobacco is, I am sure, one upon which we should insist emphatically. Parenthetically, the denicotinized cigarettes which are for sale on the market are not really denicotinized. There still remains in these products 50 or more per cent of the normal amount of nicotine.

The use of sedatives is a time honored method of treatment, particularly in those patients with neurogenic hypertension. Instead of the common 30 mg. dose, many patients tolerate large doses such as 0.1 gm. phenobarbital three to four times a day, without toxic symptoms of any sort. The blood pressure will show a beneficial response to this dosage when smaller amounts seem to make no difference at all.

The vasodilator group of drugs should be given adequate trial, but in general these substances are rather disappointing.

Of late the dietary treatment of hypertension has been in the foreground again, both in the medical and lay literature. The weight reduction regime for obese hypertensives is a well established procedure and one which leads to considerable improvement in many instances. It should always be prescribed when indicated. Next come the more special diets, of which there are many. Perhaps the best known is that of Kempner at Duke University, who for a number of years has advocated the use of his "rice diet." The Kempner diet is not strictly a hypertension diet, but a diet meant for decompensated kidneys which are so injured that they cannot excrete properly the catabolic products of animal proteins. Kempner has substituted vegetable protcins for these in his diet which consists essentially of rice, sugar, fruit, and fruit juices, with an addition of vitamins and iron. The monotony and great restriction of the diet militate against its prolonged use. As yet no truly critical analysis of the various aspects of this diet has been published.

The very low sodium diet which has been used recently appears promising, but is still *sub judice*. The old low protein diet which was current many years ago and which is still used empirically by some physicians for all types of hypertension, has been completely discarded as such in modern therapeutics. Certain types of kidney disease such as glomerulonephritis may indicate protein restriction, and certain diseases with associated edema such as heart disease with failure may require salt restriction, but dietary restriction as such should not be lightly undertaken because of the inconvenience to the patient and his family.

The use of kidney extracts has fallen far short of the anticipated benefit and is not practical for general use at this time. Large amounts of vitamin A have also been recommended but the results have not been confirmed. Rutin, a new and harmless drug, a derivative related to those substances found in citrin, may be of benefit in conditions where the capillary permeability has been increased, but is not of benefit in hypertension per se. The dosage is about 20-40 mg. three times a day.

Thiocyanates may be of value in a fair percentage of patients. The important thing is a frequent check on the blood level of the drug, which may vary tremendously in different patients. In some patients it may take eight times as much of the drug to arrive at and maintain a satisfactory blood level as it takes in others. The desired blood level is 6 to 12 mg. of thiocyanate per hundred cc. of blood. A simple test may be performed with a small set marketed by Lilly. It is easy, quick, and inexpensive. Thiocyanates are supplied in 0.2 gm. pills of the sodium or potassium salts or in the elixir. The dosage has to be changed successively each week according to the blood thiocyanate level. At the end of three to four weeks the dose is usually well stabilized. After this the patient is asked to come back every four to six weeks for control blood determinations. It is very important not to let the patient have a thiocyanate prescription which he can renew. Always write on the prescription, "Do not refill," so that he will not get himself into trouble. Barker believed that more than 50 per cent of patients will have reduction in blood pressure, and that all will have reduction in symptoms, with adequate thiocyanate levels. It has also been noted that some patients unsuccessfully treated with sympathectomy may respond to thiocyanate postoperatively, even though before the operation thiocyanate had no effect on the blood pressure.

The toxic effects of the thiocyanates have been over-emphasized. Occasional effects, such as lack of appetite, nausea, dizziness and the like often disappear with continued use of the drug and are seldom the cause for stopping it altogether. Symptoms like dermatitis may go away with continued use, but it is always wiser to stop use of the drug until the rash has disappeared. Resumption of the drug often causes no further dermatitis.

Tetraethyl ammonium is a drug which has caused a great deal of interest. Essentially, it produces a blockade of the autonomic nervous system, an effect similar to total sympathectomy. Sometimes, though

rarely, it produces miraculous relief for a period of hours or days in patients with intractable hypertensive headaches.

Dr. Daniels: There are some types of hypertension which are specifically curable by a surgical approach. Certain tumors of endocrine origin yield brilliantly to operative treatment. In unilateral kidney disease one takes out the diseased kidney and also performs an adequate sympathectomy on that side: then, should the results of nephrectomy be disappointing, one-half of the operation of sympathectomy for relief of essential hypertension is already accomplished. This procedure adds little to the risk of the operation of nephrectomy.

Coarctation of the aorta may be treated surgically. This operation has been done a number of times, and quite successfully. However, it should be an operation for youth, and the patient who is 30, 35 or 40 probably is a poor operative risk. In the older age groups there are arteriosclerotic changes that have taken place in the proximal portion of the aorta so that it is difficult to get a firm suture line when one does an end to end anastomosis.

Intracranial tumors may present themselves with a picture of hypertension. It is important to remember that brain tumor can give all the symptoms of malignant hypertension.

The surgical attack on essential hypertension has been going on since 1923 when Kraus suggested that sympathectomy might release the tone of the blood vessels and reduce hypertension. It was first tried out on a small scale by merely stripping the femoral arteries. That was unsuccessful, as we might expect it to be in the light of our present knowledge. Pieri in 1927 was the first to do a splanchnic resection, but he did it only on one side. A unilateral splanchnic resection is useless as far as this disease is concerned. In 1930 Adson did a laminectomy from the fourth thoracic to the second lumbar segment with section of the nerve roots. The mortality rate was high and the operation was abandoned. In 1932 Craig sectioned the splanchnic nerve below the diaphragm. In 1935 Peet first performed his procedure. About 1940 Smithwick became convinced that a more radical approach to the problem was necessary. He devised the so-called thoraco-lumbar sympathectomy in which he approached the nerves from above and below the diaphragm, and removed the ganglia from the eighth thoracic to the second lumbar segments, and most of the splanchnic nerves. He has reported much better results by this more extensive sympathectomy. Since then, Grimson at Duke has even gone further: he removes from the fourth ganglion down to and including the third and at times even the fourth lumbar ganglion as well as the splanchnic nerve trunks. Each operator, then, has his own operation. They differ so greatly in magnitude that the statistics of each are hard to compare.

We classify our essential hypertensives into four groups. Group I shows only arteriolar constriction in the eye grounds. Group II shows tortuosity and nicking of the veins, Group III shows the presence of retinitis with or without hemorrhage or exudate. Group IV is the so-called malignant type of hypertension with papilledema. If one divides cases of hypertension on this basis, one will find the following correlation with the clinical history. In Group I are the early cases, which generally respond well to rest and sedatives. In Group II are those with an established hypertension. They do not do so well on rest. Their tension may fall, but not to normal. They have a history of hypertension of two, three or four years or more in duration. In Group III, we will find the hypertensives of long standing, many of whom are asymptomatic. The patients in Group IV may have had hypertension only a short while. We have seen one patient who had no evidence of hypertension nine months before an examination showed malignant hypertension.

With this classification we are able to arrive at figures which give us some idea as to prognosis. In a series of cases treated medically and reported by Keith, Wagner and Barker the fatality rate at the end of four years was 30 per cent in Group I, 42 per cent in Group II, 78 per cent in Group III and 98 per cent in Group IV. In a series treated surgically by Smithwick and others the fatality rate after four years or more was 0 to 10 per cent in Group I, 10 to 25 per cent in Group II, 60 to 80 per cent in Group III and 75 per cent in Group IV. The fact that 25 per cent of the patients with malignant hypertension were alive and well after a period of at least four years' observation is significant, when under a medical regime only 2 per cent survived. Peet has one patient who is perfectly well 12 years after sympathectomy for malignant hypertension.

Bilateral kidney disease is a serious complication and probably is a contraindication to sympathectomy. Smithwick found that in those patients with bilateral kidney disease he had only 12 per cent good results in all groups of hypertension as contrasted to over 65 per cent good results in the patients without any kidney disease.

The patient selected for operation must not be too old. Smithwick recommends that the patients should be in their forties or younger. Peet operated on a patient 63 years of age. In our own series, 51 has been the oldest, but if the chronological and physiological age is somewhere around 45, we feel that the patient qualifies in this respect for sympathectomy.

What happens postoperatively to these patients? First and foremost, they have pain. They have more pain than after any other surgical procedure that I know of; and it is a difficult pain to relieve. It is present for a varying period of time. We had one patient who went back to work one month after a bilateral sympathectomy, and we have had other patients who took six months before returning to work.

The next thing that happens is the development of postural hypotension. These patients may have a high blood pressure while in a supine position. The

systolic pressure may be 200, but on standing up it may drop as low as 60, and you can imagine the effect that this has upon the organism as a whole. There is tachycardia, weakness, and even fainting. The instant these patients assume a horizontal position again, these symptoms disappear. This postural hypotension may last for a period of a few weeks to a year or more. It can be relieved in several ways. One is to tilt the patient's bed a little so that his head is up and his feet are down as he sleeps. A second is to apply a tight binder to the abdomen and legs.

Some patients develop an effort hypotension. When the average person with normal tension works, his blood pressure may remain constant or it may rise. If the patient with hypertension exerts himself, the blood pressure rises appreciably. In patients who have had an adequate sympathectomy, the reverse follows; upon effort, the arterial tension drops. With rest and quiet the tension tends to rise. We feel it is important for patients who have had the operative procedure to get up and around, thus reducing their tension.

A most important postoperative effect is the relief of symptoms such as headache, tension, nervousness and palpitation. This may be striking even when the arterial tension is not materially lowered.

A postoperative effect to speculate upon is: What will happen to these patients if they get a visceral disease, such as appendicitis or a peptic ulcer? Will sympathectomy interfere with pain sensations that might be conveyed early in the normal person with such a disease? We do not yet have a sufficient number of patients who have developed such complications to give us a definite answer.

We do our operation transthoracically, resecting the ninth rib. We open the diaphragm wide so that we can explore the kidney and adrenal gland and we are able to expose without difficulty the sympathetic chain from the fourth thoracic down to the third lumbar ganglion and remove this entire chain and the splanchnic nerves.

California Cancer Commission Studies*
Chapter XIV

Cancer of the Larynx

Simon Jesberg, M.D., *Los Angeles*

Of all the malignant neoplastic diseases to which the human body may be host, intrinsic cancer of the larynx is exceeded only by skin cancer in its chance of cure. Early diagnosis and efficient treatment are readily available. There is no internal region of the body where cancer makes known its presence as early as in the larynx, (hoarseness, dysphonia). The site of origin of the malignant new growth is generally within the larynx where it is confined for a relatively long time: extension to the cervical lymph nodes and perilaryngeal structures is a late event. Here, then, is a situation in which there is an unusually favorable opportunity for successful treatment.

INCIDENCE

About 4 per cent of cancers in man arise in the larynx. Cancer of the larynx can occur at any age, but the greatest incidence is in the fifth and sixth decades. Males are affected about ten times more frequently than females, but in the last few decades the incidence in women seems to be increasing. There is one form of laryngeal cancer that for some unknown reason occurs about seven times more frequently in the female. This is the postcricoid cancer which arises from the posterior surface of the cricoid area.

ETIOLOGY

While the causes of malignant growth are not yet known, there are certain factors that seem to induce its occurrence in the larynx. Abuse of vocal cords, tobacco smoking, alcohol, and chronic laryngitis from whatever cause seem to be exciting factors. Heredity apparently plays a minor role in the development of laryngeal cancer. Leukoplakia and hyperkeratosis have been known to metamorphose into cancer.

PATHOLOGY

By far the greatest majority of malignant tumors of the larynx are of epithelial origin, and Jackson and Jackson state that 93 per cent are epidermoid or squamous cell carcinoma. Basal cell carcinoma and adenocarcinoma are occasionally found, and mesothelial malignant tumors such as fibrosarcoma, osteosarcoma, chondrosarcoma, endothelioma, and the various type of malignant lymphoma are also occasionally encountered. We need consider here only the epidermoid carcinoma which, according to Broders, may be classified into four degrees of malignancy. In the lower degrees of malignancy the neoplastic cells are more uniform in size and the neuclei tend to be small; there may be considerable fibrous stroma in the tumor, the percentage of keratin is high, and pearl formation is noted. In the higher degrees of malignancy, there is greater variation in size and shape of cells, the neuclei are larger, there is much less stroma to the tumor, and mitotic figures frequently may be seen.

The type of carcinoma is determined by the nature of the epithelium at the site of origin and the characteristics of its construction will follow the type of the parent cell. Thus laryngeal cancers generally fall into one of two categories. The first are of a low grade malignancy and most frequently arise from the squamous epithelium of the true vocal cords. These grow slowly, are for a long time localized, and extend to regional lymph nodes only late in the disease. This type was formerly thought to be radioresistant.* The cancers of high grade malignancy usually are of extra cordal origin and spring from columnar epithelium. These are more rapid in growth and are usually more radiosensitive, but the prognosis is poorer. They are also much less amenable to surgical treatment.

The gross pathologic changes of laryngeal cancer have long been a somewhat confused subject. In laryngeal parlance, the terms intrinsic and extrinsic have long been in use although they do not give very exact information as to the site of the cancer. Intrinsic lesions are those confined within the larynx from the laryngeal introitus to the subglottic region (Figure 1). Extrinsic lesions are those involving the epiglottis, aryepiglottic folds, arytenoids, pyriform sinuses or postcricoid area (Figure 2). For clinical purposes perhaps it would be more practical to refer to "cordal cancer" and "extra cordal cancer." Approximately 85 per cent of the laryngeal cancers arise from the squamous epithelium of the true vocal cords and produce the symptom of hoarseness at an early stage. In the main, these tumors tend to be of low grade malignancy. The neoplastic process slowly extends along the cord longitudinally and may cross over the anterior commissure to the opposite cord. The process also extends through the muscles and tendons of the cord toward the laryngeal cartilages until the cord is fixed in a state of immotility. From here the tumor may extend to the cartilages and through them, subglottically and break through the cricothyroid membrane, or anteriorly and upward and invade the pre-epiglottic space. The lymphatic drainage system from the inside of the larynx to the neck is poor, and most of the lymph radicals exit through one small opening in the cricothyroid membrane.

Tumors arising within the larynx from sites other than the true cords (false cords, ventricles, inter-

* Organized by the Editorial Committee of the California Cancer Commission.

* See treatment.

arytenoid space) arise from columnar and not squamous epithelium. They tend to be of a higher grade of malignancy and to spread much faster. The symptom of *hoarseness* may not be produced at once. Tumors arising on the epiglottis, aryepiglottic folds, arytenoids and pyriform sinuses are usually of a higher grade of malignancy also. The initial symptoms of all the extra cordal lesions are less obvious and harder to associate with laryngeal disease than is hoarseness, but there is usually *severe pain located in the throat, a pain referred to the ear, a lump in the throat*, or *disturbance in swallowing*. Even in extra cordal lesions hoarseness eventually develops, but not until the tumor has had a chance to get a good start. *Blood spitting* may be a symptom and as extrinsic lesions proliferate, fatal hemorrhage may occur. Lesions within the larynx, if allowed to proliferate without treatment, will gradually close off the airway and there will be a slowly progressive difficulty in breathing with an inspiratory prolongation of the respiratory cycle and with tracheotomy or suffocation in the offing.

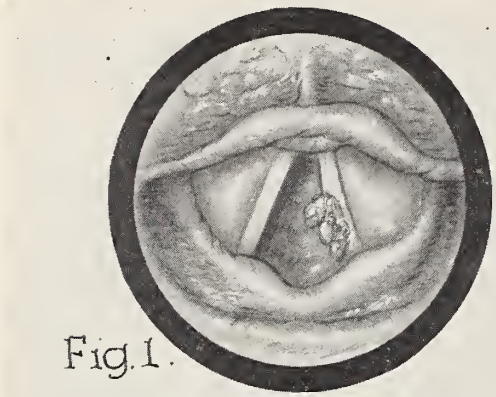


Fig. 1. Cordal Cancer



Fig. 2. Extracordal Cancer

DIAGNOSIS

Hoarseness or dysphonia is a constant and early symptom of cordal cancer. Persistent hoarseness at any age should be viewed with suspicion. It calls for complete laryngeal examination. Indirect or mirror examination is so easily done that it should always be a part of a routine throat examination. Direct laryngoscopy must be done if for any reason the indirect method is not satisfactory. The final arbiter is biopsy with histological diagnosis. After a preliminary indirect examination has been made and the possible presence of a new growth determined, a specimen is removed by direct laryngoscopy with a small punch forceps. The tissue is examined in the laboratory and if a positive diagnosis is not made the biopsy should be repeated. The importance of early tissue examination can not be overemphasized, for on that depends the diagnosis. Also it is a factor in the selection of treatment.

TREATMENT

The objective of treatment is the complete removal or destruction of the cancer, with the patient left in a satisfactory physiological condition. The selection of the treatment must be governed by the site of the lesion, the extent of involvement, and the grade of malignancy. The methods of treatment are surgical operation, or irradiation, or a combination of both.

Irradiation treatment has been developed in the last 20 years to a high degree of efficiency, but of course it is of no value if the cancer is not radiosensitive. Highly malignant tumors which are usually of extra cordal origin are best treated by irradiation. The method generally used is the protracted fractional method originated by Coutard. If irradiation treatment does not make satisfactory progress surgical operation may be of value. In cases in which operation has been tried first and has failed, irradiation is usually tried, although it is seldom of much use. Because the choice too often rests with the patient and not with one who is competent to direct treatment, irradiation is often employed when surgical treatment would give a much better chance of cure.

For cancers of low grade malignancy, surgical treatment offers a good prognosis since these tumors remain local for a long time. Cordal cancer in which the cord is motile and the lesion is not too far anterior to involve the anterior commissure or too far posterior to involve the vocal process, is best treated by laryngofissure (thyrotomy). The true vocal cord and pericordal tissue, together with the inner perichondrium of the thyroid cartilage, is removed. This gives 80 per cent to 90 per cent five-year cures. The voice, while changed by this procedure, is generally good.

If the cord is fixed, then the cancer has infiltrated into deeper structures and possibly has invaded the cartilage. If the cord has only recently become fixed and if the lesion appears confined to the cord within the larynx, laryngofissure with removal of the un-

derlying thyroid cartilage is done. Total laryngectomy is the operation of choice if the cancer has extended beyond the confines of the true cord, either above, below, or to the opposite side. Laryngectomy will give about 60 per cent five-year cures in such cases. Successful laryngectomy leaves the patient much less handicapped than is generally supposed. He can enjoy life and although he has lost normal speech he can learn a new method of talking either with an esophageal voice or by using an artificial larynx.

* See note by Editorial Committee.

SUMMARY

1. Persistent hoarseness, laryngeal pain, or changes in the voice which cannot be accounted for at any age should be viewed with suspicion and early laryngeal examination should be made.

2. Early biopsy and tissue examination is essential in diagnosis and the selection of treatment.

3. The choice of treatment should be governed by the site of the lesion, extent of involvement, and the grade of malignancy.

4. The treatment should be individualized.

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* *Comment by Editorial Committee:*

It used to be thought that in the larynx, surgical operation and radiation therapy complemented one another. It was believed that intrinsic lesions must be attacked surgically since they were probably radioresistant, while extrinsic lesions, presenting a much poorer surgical prognosis, were radiosensitive. Experience since has shown that instead of being complementary, surgical and radiation therapy are parallel weapons. It is recognized that radiosensitivity and radiocurability are not synonymous, and, further, that degree of cell differentiation is only a very rough index of either, particularly since the same tumor may show areas of different grade and only a tiny sample is obtainable for biopsy.

All factors must be evaluated in each case in planning treatment. The decision has become harder since it has been demonstrated that in early cordal lesions and 85 per cent "cure" rate, without voice impairment, has been achieved by irradiation. Conversely, the poor roentgen salvage of the extrinsic lesions may possibly be bettered by radical surgical removal (total laryngectomy).

There is a growing trend toward applying a therapeutic trial of complete irradiation, to be followed later by surgery if response is poor. The increase in the surgical difficulties secondary to irradiation is largely mythical. A more weighty objection is the loss of time and increased discomfort in cases of radiation failure.

Chapter XVI

Carcinoma of the Lung

John C. Jones, M.D., *Los Angeles*

CARCINOMA of the lung is found in 10 per cent of men with cancer coming to autopsy; it is second in incidence to carcinoma of the stomach. The development of a safe surgical technique for total pneumonectomy has far surpassed clinical advances for the earlier diagnosis of this lesion. The low surgical mortality attending such operations should be a vital stimulus to all physicians to make an early diagnosis of a common disease which can be cured only by surgical extirpation.

According to reliable statistics, the actual incidence of the disease is on the increase. As with other carcinoma, the cases occur in greatest number in patients between the ages of 40 and 60 years, and there seems to be a slightly greater incidence in the right lung than in the left. It is more common in males, the ratio of incidence being four to one, with some physicians reporting a ratio as high as eight to one.

SYMPTOMS

The symptoms are essentially the same as those of inflammation. Variations depend on the location and size of the tumor and the degree of obstruction and ulceration of the bronchus. The vast majority of the patients complain of *cough as the earliest symptom.* Frequently they volunteer that they have a dry "cigarette cough" which later usually becomes productive of mucoid sputum. As the lumen of the bronchus becomes obstructed, the retained secretions become infected and the cough yields purulent sputum.

Chills and *fever* are an indication of the retention of infected secretions, and an erroneous diagnosis of pneumonia, pneumonitis or influenza is frequently made.

Wheezing, at first intermittent, sometimes becoming constant for a while and then suddenly disappearing with complete occlusion of a bronchus by the tumor, is a common complaint. This sequence of development is usually elicited by carefully questioning the patient.

Pain is a very common symptom, varying from a discomfort, or a feeling of tightness or oppression, or a characteristic pleuritic pain of varying degree, to the severe intractable pain due to the tumor invasion of the brachial plexus or the intercostal nerves. Severe pain is usually indicative of mediastinal,

pleural or chest wall involvement, and of inoperability.

Hemoptysis occurs in more than half of the patients. There is nothing characteristic about it. It may range from slight or occasional streaking all the way to fatal hemorrhage. Bleeding is frequently in direct ratio to the amount of infection and ulceration. Tumors arising far out in the bronchial tree become infected later than those arising in major and secondary bronchi, and are less apt to cause hemoptysis. It is not unusual for patients to deny raising blood, then on careful questioning to admit occasional blood streaks in mucoid sputum.

Weight loss is a rather constant complaint and, except in those patients with obvious metastases, is usually greater in the patients who have considerable infection complicating the tumor. Weight loss, then is not in itself an important indication in the consideration of operability.

Dyspnea, which occurs in about a fifth of the patients, may be due to atelectasis, but more commonly accompanies pleural effusions. The vast majority of effusions are indicative of extension to the pleura, but occasionally they are due to the secondary inflammation of the lung.

Clubbing of the fingers and toes may be observed early in the disease before any symptoms referrable to the intrathoracic disease are present. It is seen frequently later in the course of the disease and is of no particular significance.

Hoarseness is occasionally noted as the first symptom, and it signifies inoperability because it means that the cancer has invaded the mediastinum to involve the recurrent laryngeal nerve.

Not unusually in a patient having no symptoms referrable to the lungs and virtually no physical findings on examination, a routine roentgenogram will reveal a small pulmonary lesion which has already metastasized to the skeletal system, to the central nervous system, or to other organs. For this reason neurosurgeons have for a long time routinely ordered roentgenograms of the chests of all patients suspected of having a brain tumor.

Hoarseness; Horner's syndrome; phrenic nerve paralysis; intractable pain with involvement of the intercostal nerves or bracheal plexus; cervical, axillary and supraclavicular metastatic lymph nodes—all these are of little significance in making an early diagnosis. They indicate only a state of inoperability.

PHYSICAL FINDINGS

The physical examination will yield findings varying according to the location and extent of the lesion and atelectasis, the extent of the infection, and the presence of metastases. Expansion of the hemithorax is usually decreased and there is a noticeable lag on respiration. Careful palpation for metastatic lymph nodes in the cervical, supraclavicular, and axillary areas is most important. Auscultation of the trachea with the stethoscope may reveal a wheezing respiration. Dullness on percussion with suppressed breath sounds over the involved area are common findings. The presence of rales will depend on the degree of obstruction and the extent of the secondary infection.

DIAGNOSIS

Late diagnosis of carcinoma of the lung is due either to a patient's seeking medical advice long after the onset of symptoms, or to the physician's failure to recognize the importance of the patient's complaints and of carrying out the necessary diagnostic measures. All too often, carcinoma masquerades under the erroneous diagnosis of atypical or virus pneumonia, and frequently the correct diagnosis is long delayed by the temporary clinical improvement in the patient in response to repeated sulfonamide and penicillin therapy. *It is most important to emphasize that clinical improvement following chemotherapy without a complete roentgenographically confirmed clearing of the broncho-pulmonary lesion in an adult is indicative of at least a tentative diagnosis of primary bronchogenic new growth until proved otherwise.*

The sputum should be examined for tubercle bacilli and a search should be made for tumor cells.

Roentgenography is the greatest single diagnostic aid. It suggests the diagnosis in a vast majority of cases. The tumor itself may cast the entire shadow where the lesion is peripheral—that is to say, arising far out in the bronchial tree. A tumor arising in a primary or a secondary bronchus, a so-called "central lesion," does not cast a distinct shadow of its own, but one of atelectasis. Finally, a third type of roentgen manifestation may be evidence due to bronchiectasis, abscess or pleural effusion secondary to the primary tumor. There are no characteristic roentgen features of bronchogenic carcinoma, for it may simulate all types of lesions, such as bronchiectasis, tuberculosis, lung abscess, lymphoblastoma, benign tumor, pneumonia and pleural effusion. Careful fluoroscopy and lateral and oblique roentgenograms are frequently necessary diagnostic aids. Only in certain cases is bronchography indicated, namely those in which the tumor is small and bronchoscopy has not aided in the diagnosis. Then a filling defect is searched for by outlining the bronchus with lipiodol. The injudicious use of bronchograms not infrequently flares up an acute pneumonitis in cases in which the infection is present with retained secretions. Far more preferable are tomograms or planigrams, which have proved of great aid where the lesions were well beyond the vision of the bronchoscope and biopsy specimens were not available. Planigrams reveal partial or total bronchial obstruction characteristically inside the outline of the tumor shadow and are indicated where bronchoscopy yields no information.

Bronchoscopy, the next most important diagnostic aid, is the easiest, most accurate method of early diagnosis. A biopsy specimen is obtainable in about 50 per cent of the cases. Bronchoscopy may yield important information, such as a showing of narrowing and fixation of the bronchi, even though the tumor arises beyond the visual field of the bronchoscope and a biopsy specimen is not obtainable.

Operability may be determined at the time of bronchoscopy, and the retained infected secretions may be aspirated to improve the patient's condition for operation if surgical removal proves feasible.

Needle biopsy of the lung is mentioned only to condemn it. Hemorrhage, infection, and extension of the tumor along the needle track are serious complications contraindicating its use. Needle biopsy should be limited to peripheral tumors in patients in whom a diagnosis is most imperative and an exploration is to be avoided if possible.

In cases in which the history and the diagnostic measures indicate a presumptive diagnosis of carcinoma of the lung and positive tissue biopsy has not been obtained, exploratory thoracotomy is definitely indicated. The safety of the operation and its great advantages over the limitation of thoracoscopy far outweigh any advantages of the latter procedure as a diagnostic aid.

PATHOLOGY

It is now generally agreed that all cancer of the lung arises from bronchial mucosa and is of a high degree of malignancy. The bronchial and mediastinal lymph nodes are invaded early, and blood stream metastases to the brain, liver, adrenals and kidneys are common. The common types of primary carcinoma of the lung are (1) squamous cell carcinoma, (2) adenocarcinoma, (3) the small cell type "oat cell," and (4) the undifferentiated. The squamous cell carcinoma occurs more frequently than do the others. It apparently has a slower course and the incidence of metastases is lower. It is therefore a more favorable type as regards operability and offers the best prognosis from the standpoint of a surgical cure. The adenocarcinoma and undifferentiated carcinomas are much more rapid in their progress, have a higher incidence of metastasis and a much lower surgical operability, and therefore a poorer prognosis.

TREATMENT

Total pneumonectomy with resection of the regional mediastinal, subcarinal and azygos lymph nodes is the only operation that offers a cure. The incidence of recurrence following lobectomy is convincing evidence that pneumonectomy should be done where it is feasible. Exploratory thoracotomy with a view to proceeding with a pneumonectomy in cases not proved by biopsy is an entirely safe procedure.

Roentgen therapy at best offers the patient only palliation in lesions that are radio-sensitive, and is reserved for the cases that are inoperable.

RESULTS

Approximately 60 per cent of cases are clinically inoperable because of metastases or other causes when they come to the surgeon, and about 40 per cent of those explored are surgically inoperable by virtue of extension of the lesion well beyond feasible surgical extirpation. The mortality from surgical exploration in the inoperable cases has been very low, and the surgical or hospital mortality in pneumonectomy is now reduced to about 4 per cent. The incidence of recurrence and metastasis in the cases in which operation is done varies from 35 to 65 per cent in the first two or three years, depending on the number of so-called "palliative pneumonectomies" the surgeon has included in his series, i.e., pneumonectomies where it was obvious that all the disease could not be eradicated but that the symptoms might be temporarily relieved by the extirpation. The total salvage in an unselected group of cases with carcinoma of the lung is still very low, and this presumably is due to the delay in the diagnosis.

SUMMARY

1. Only the early diagnosis and early resection can elevate the appallingly low operability and curability rate in cancer of the lung.

2. Innumerable patients have lost their only chance of a cure because of the loss of weeks or months while roentgen therapy was given and its effects studied.

3. The physician must not be lulled into a sense of security by the apparent clinical improvement as the result of chemotherapy (sulfonamides and penicillin) for a broncho-pulmonary lesion which cannot be shown by roentgenogram to be *entirely cleared.*

4. Carcinoma of the lung mimics inflammatory lesions both clinically and in roentgenograms, and the clinician must constantly keep it in mind if a lesion does not respond to the usually prescribed treatment.

5. A common and otherwise fatal disease which is curable surgically, with a low operative mortality and without deformity, is a challenge to the medical profession to make the diagnosis earlier.

"Cancer of the Esophagus" by Dr. Brodie Stephens, Chapter XVII of the California Cancer Commission Studies, will appear in this section in the May issue of California Medicine.

California MEDICINE

OWNED AND PUBLISHED BY THE CALIFORNIA MEDICAL ASSOCIATION
450 SUTTER, SAN FRANCISCO 8 PHONE DOUGLAS 2-0062

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EDITORIALS

Drastic Therapies

The use of somatic treatment procedures in psychiatry is nothing new. Blood letting, purgatives and emetics, vaccines, endocrinological substances, fever production with malaria and typhoid, prolonged narcosis with sedatives, and surgical procedures like thyroidectomy and hysterectomy—all these have been utilized in the past. And they were considered as drastic as the methods now being widely used, such as insulin and the various electro-convulsive treatments. The term "shock" therapy is a misnomer. Physiological shock is not produced, and the treatment is not directed at frightening or "shocking" the symptoms out of the patients. To describe these methods, including the surgical approach known as frontal leukotomy, as "drastic therapies" may be accurate in that they are violent treatments which may act rapidly and dramatically. But this is not to their discredit, for psychotherapy itself may be even more violent in its onslaught on the psychological defenses of the individual.

The shock therapies—insulin, electro-shock and electronarcosis—are now being re-evaluated and revised in the light of long continued experience. There is overwhelming evidence that convulsive therapy materially shortens the majority of depressive episodes, in particular those severe depressions observed during the involutional period. The therapeutic effect is not so certain nor so dramatic in the manic attack. Such treatment is definitely not prophylactic, and it will not prevent recurrence.

The results of the electro-convulsive treatment of schizophrenia are not so certain. Dramatic results may be obtained in selected cases, but relapses are definitely more frequent than in the affective psychoses. Although it was first thought that the newer electronarcosis treatment of schizophrenia might offer better results than electro-shock therapy, continuing clinical experience does not confirm this first impression. It is probable that electronarcosis offers little advantage over electro-shock, and that the therapeutic efficacy of each mode of treatment depends essentially on the production of a convulsion. In the treatment of the psychoneuroses, electro-convulsive therapy has been for the most part a failure, and too often it has been administered because the therapist has been frustrated in his psychotherapeutic efforts or because he has rationalized to himself that the patient will be more psychotherapeutically accessible if the "affective" components of the patient's illness are removed by the convulsive therapy. Since the patients in such cases usually do not need hospital care, many have been treated in office practice, sometimes indiscriminately and without the supervision needed in the period immediately following treatment. However, the therapy in general should not be condemned because it has been injudiciously applied in some cases. It has definite limitations, as does every other therapy in medicine. It is not a panacea. It is not without certain hazards and possible complications, such as vertebral fractures, which can be adequately controlled by appropriate measures in competent hands. Within these limitations electro-convulsive therapy is a powerful and efficacious tool in the therapeutic armamentarium of the psychiatrist.

Because of its simplicity and ease of administration, electro-shock therapy has tended to supplant the more complicated insulin hypoglycemic treatment, although there is considerable evidence that insulin therapy is more beneficial in the treatment of schizophrenia. With any treatment the relapse rate is high, particularly in schizophrenia. Shock therapy in any form can be looked upon as only one facet of a total psychiatric regime, and it should be considered only after a thorough study of the patient has been made.

No adequate theory of the mechanism of action, physiological or psychological, of shock therapy has as yet been formulated. The theory of a biological antagonism between epilepsy and schizophrenia, advocated by von Meduna, has not been substantiated, nor do the theories emphasizing the importance of an anoxia of the brain or stimulation of the sympathetic nervous system in producing therapeutic results serve as entirely satisfactory explanations. Psychological theories to the effect that the treatment acts as a threat to life which mobilizes all the patient's energies to return to reality, or that it acts as a medium by which the patient expiates his sense of guilt, may sound intriguing, but it is seldom that facts can be found to substantiate them. No one of these concepts is sufficient in itself to explain adequately the speed with which therapeutically dramatic results occur.

Surgical operation for the relief of mental symptoms has been practiced since ancient times. Even today the removal of the uterus and ovaries, or of the thyroid, is too often done for the relief of "nervousness." The operation of frontal lobotomy or leukotomy is, however, a more direct approach to the problem of amelioration of the symptoms of mental disease, and it is advocated with the neurophysiological rationalization that isolation of the prefrontal cortex by cutting the fiber connections between the thalamus and prefrontal cortex will cause psychopathologic ideas and feelings to lose their emotional potency and that in time these may even disappear. The procedure is still in a stage of development at which it should be considered only for those patients who are believed to be chronically ill, who have not responded to other appropriate forms of therapy and who are not likely to recover in the future. These would include patients with chronic schizophrenia, chronic depressions, and long-standing severe obsessive compulsive symptoms which have not responded to psychotherapy and shock therapy and whose symptoms seriously interfere with the individual's social and occupational adjustment. Observation of patients who have undergone this operation leaves little doubt that destruction of areas considered to be the seat of the intellect can affect the personality greatly and the intellect very little. Defects do occur, especially at the level of imaginative and creative thinking, and although much of this loss is regained over a period of years, complete restitution is improbable. Apparently other association pathways take over the function of the cut fibers.

In making a decision about recommending frontal lobotomy for a patient, one must remember that one is introducing and superimposing an organic disease of the brain on a functional disorder. If that functional disorder is a chronic disabling or deteriorating one, and the symptoms resulting from leukotomy will be less handicapping than the functional disorder, therein lies the indication for operation if all other modes of therapy have failed. Any therapeutic means, limited though they may be, which can help to deal with the serious problems of mental disease, demand unbiased and unprejudiced appraisal. Each must be considered only as a part of a total psychiatric structure in which psychotherapy should be the cornerstone.



Industrial Medical Fees

Heartening news for the medical profession came out of the Industrial Accident Commission of the State of California last month, when the Commission approved a surgical fee in excess of the minimum fee set forth in the official schedule. If this action may be considered a test case, the medical profession may confidently expect fair and impartial consideration by this important state body.

In the case recently decided, a surgeon was called upon, just as he was leaving a hospital, to examine an injured patient who had just been brought in. The patient was a workman who had fallen from a scaffold and was in a dangerous condition. The surgeon ordered a blood transfusion, called for two other specialists, a surgeon and a urologist, and did an exploratory laparotomy. When he located the injury in a kidney, he performed a nephrectomy via transperitoneal approach, followed up with more transfusions, and complete recovery resulted. Here was a definite life-saving procedure, performed in emergency circumstances and resulting in a splendid recovery.

When the surgeon rendered his statement to the insurance carrier he was tendered a check for the minimum fee for nephrectomy, plus the attendant charges. He protested the small fee allowed, particularly in view of the difficulties and time consumed in the operation, only to be met with the statement that the fee schedule adopted by the Industrial Accident Commission set forth that particular fee for that particular procedure. On the advice of the California Medical Association and with its cooperation, the doctor filed a claim for the fee he had requested. A hearing was held by a referee and the Industrial Accident Commission granted the doctor the fee he had asked.

One of the startling aspects of this case was the claim of the medical director of the insurance carrier that the California Medical Association had been instrumental in drawing up the existing industrial

fee schedule and that the fee for a nephrectomy was clearly set forth. This medical director deliberately by-passed the fact that the present fee schedule lists all fees as minimum and provides that higher fees shall be warranted where unusual difficulties or time factors are involved. Further, he contended that the doctor had no complaint because he had received the case of an unknown patient in an emergency. To top it all off, when told that the life-saving nature of the case had probably saved the insurance carrier a $6,000 death benefit, he stated that this was a problem for the claims department of the carrier and not the medical department. The overall picture of an injured workman, the potential loss of life and of money, and the duty of the insurance carrier to its beneficiaries and physicians alike, was left out of consideration.

In holding an impartial hearing in this case and in granting the physician's request for a fee higher than the minimum, the Industrial Accident Commission has recognized that a minimum fee does not necessarily represent a maximum. The Commission has also served notice on insurance carriers that the rights of physicians are to be protected under the structure of the laws governing industrial accidents. Likewise, it has in effect notified all employed persons in California that the best in medical and surgical care is available to employees injured during the course of their employment, regardless of the cost of such care.

The California Medical Association worked for more than four years, often against tremendous odds, to secure the adoption of a more complete, more up to date, schedule of industrial fees by the Industrial Accident Commission. The Association has offered its services to its members who are subjected to chiseling tactics by employers or insurance carriers, and it has been able to effect payment of proper fees in various cases where deductions had been made by the employer or his agent. In reaching its recent decision, the Industrial Accident Commission has proved that it looks beyond the monetary interest of the insurance carrier and into the overall benefit of the injured workman and those who care for him. This is the spirit of the industrial compensation laws of the state and the medical profession may take cheer from the existence of a Commission with a firm conviction of its own obligations and authority and the courage of its convictions.

EDITORIAL COMMENT

BCG Vaccination

As BCG will probaby be used soon in California among certain groups in the child population, it would seem pertinent to review certain aspects of this still debatable subject. It is of special interest to pediatricians, as they will be giving it, if it ever be universally adopted. It will be given in the age group with which pediatricians have to deal. If adopted on a voluntary basis, as it should be at first, they will either have to give it or give counsel to the parents as to the advisability of its acceptance. It will be their job to explain the failures, the complications of its use, the running sores which have often accompanied the vaccination, and any disaster, isolated or wholesale, following its use. It will be necessary to explain to the public, after years of careful education about the advantages of a tuberculin-negative child population, why we suddenly are aiming at exactly the opposite result.

Certain points are now generally accepted by all workers interested in BCG. First, it is harmless as now given and with the manufacture of the vaccine carefully controlled and limited. At present the danger of BCG inoculation may be said to be potential rather than immediate, as no deaths have occurred in the United States attributable to its use.

Secondly, its use is a poor substitute for the non-contact of children with tuberculous disease. Its use should in no way replace the intensive efforts to abolish contacts of open cases of tuberculosis to susceptible individuals. In the most enthusiastic reports of the efficacy of BCG there are still records that some individuals so inoculated become victims of tuberculous disease. Thirdly, then the use of BCG should be restricted to tuberculin-negative groups in which the possibility of escaping contact, and therefore infection, is practically impossible. Suggested for this group would be the children of American Indian, oriental, negro, and Mexican parentage, or other groups living substandardly. To this group might be added children of parents already proved to have tuberculosis and returning to the home from sanatoria, and in an older age group, students in the medical sciences, and members of the armed forces going into oriental countries where morbidity from tuberculosis is high.

The debatable question is the efficacy of BCG as a prophylaxis against tuberculous infection. Review of voluminous international literature failed to reveal irrefutable evidence of the effectiveness of the vaccine, and the reports have not gained wide acceptance among pediatricians. Studies in Scandinavia and in South America suggest a relationship between vaccination and decreased incidence of the disease in children over a short period of time, but show no valid statistical proof of long-time benefits.

It is not enough during scientific studies on BCG to state that controls "live under similar conditions." The exact control methods should be stated and elaborated if authors expect

their results to be believed. Recent reports in America have been at fault in this regard. Taking as controls the groups in which the parents refuse the vaccination may lead to very erroneous conclusions, as was brought out by Levine and Sachett in their recent study. (Am. Rev. Tuberc., 1946, 53:517.) It is indeed a pity that, with the enormous number of children who have now received BCG, the study made by Levine seems the only one properly reported on a scientific basis, with a use of alternate cases. From his study the efficacy of BCG can be very seriously questioned, Levine's control group showing practically the same incidence of disease as the inoculated group. Carefully controlled studies such as these naturally carry more weight with pediatricians in deciding on the use of BCG than those less carefully performed.

The question to ask ourselves is this: Are we willing to use a method of partial protection, the efficacy of which is still debatable 25 years after its first use, to possibly hasten the winning of a battle, the end of which may be in sight?

The ideal method of tuberculosis control is the finding and removal of possible contacts before infection to others has taken place. BCG is a poor substitute for this, and also by its use universally we would lose our most potent screen in finding cases. This point has not been much discussed in the literature. If any widespread use of BCG be accepted, it will immediately make useless the tuberculin test, the most valuable single item in the determination of the incidence of infection, and in the sifting of cases among the young for further study. It is one of the most accurate biological tests known, although it has suffered considerably from misinterpretation and belittling from those not using it to the same extent as pediatricians use it. Frequent surveys with the tuberculin test is still the best method of telling ourselves how we are doing with the job of tuberculosis eradication.

California, by nature of its various groups of child population, has an unusual opportunity for study of the efficacy of BCG. Its use should be limited to these groups already mentioned. It should be given experimentally, on a voluntary basis, and scrupulously controlled. If used, it should be understood as no substitute for removal of contact. If these conditions be met, pediatricians, and the medical profession in general, should and will give their cooperation. On this basis, the use of BCG would give us an experiment close at home, one which would help us decide for ourselves this much debated question. We are all prone to pay more attention to things we do ourselves. It is to be earnestly hoped that in at least one of the contemplated studies in California we will gain information about the efficacy of vaccination, and that the studies will not all become just "another project."

Lloyd B. Dickey,
Department of Pediatrics,
Stanford University.

* * *

The attentuated, hile-treated culture of bovine tubercle bacilli known as BCG (Bacille-Calmette-Guerin) is receiving increased attention as an effective means of producing active immunity against tuberculosis. Recognizing this, anti-tuberculosis workers of the United States Public Health Service have heen interested in developing a program for its use in the United States.

On September 7, 1946, a conference on BCG vaccination was called by the Tuberculosis Control Division of the USPHS at Bethesda, Maryland. Participating were many of the leaders of the anti-tuberculosis movement in the United States. As a result of this conference it was agreed that BCG vaccination confers increased resistance to tuberculosis, that medical literature fails to reveal any proven case of progressive disease as a result of BCG vaccination and that BCG vaccination can be done without severe local reaction. The intracutaneous method of vaccination was recommended for use at present. In the studies presented at this conference, BCG vaccination converted a large percentage of non-reactors to the tuberculin test into reactors. The need for re-vaccination and the time interval between the vaccinations was not decided. It was recommended that a single laboratory be established for the Tuberculosis Control Division to produce BCG vaccine for the entire United States for use in research programs proposed at the conference. It was further proposed that extensive investigations should be carried on cooperatively with organized research groups throughout the nation, especially in population groups highly exposed to tuberculous infection. It was also recommended that the Tuberculosis Control Division set up a control study in a community with a population of 100,000 or more to determine immediate and long range results.

A second conference was called on March 8, 1948. In this conference Dr. Holm of Copenhagen reported that varied use of BCG vaccine was contemplated for the ensuing year in Europe. In all, ten countries are expected to be able to test and vaccinate the school children within the next 18 months. Dr. Holm is at present engaged in organizing vaccination teams to be sent out into various countries for the purpose of vaccinating as many as possible. Some fifteen million people are expected to be vaccinated under this plan.

Dr. Carroll Palmer of the USPHS pointed out that the situation in this country is different from that in Europe. Whereas in Europe the vaccination of entire populations may be quite justified, it would seem advisable in the United States to limit vaccination to selected groups and to use as many control series as possible.

Recently BCG vaccine programs have been developed by the New York State Department of Health, Herman Hilleboe, M.D., Commissioner, and released jointly by the New York State Department of Health and the Medical Society of the State of New York. This is based upon the assumption that "BCG vaccination is one of the known methods of reducing morbidity and mortality rates from tuberculosis and at present is the only known practical method of inducing specific resistance to tuberculosis." It has, therefore, been recommended for use in three selected groups:

1. In groups of occupational exposure to tubercle bacilli, such as nurses, medical students and hospital personnel.

2. In population groups with high tuberculosis morbidity and mortality rates.

3. Where there has been a known exposure to tuberculosis or where an exposure is likely to occur as in the households of patients returning from hospitals and sanatoria.

Objection has been raised chiefly on the part of the pediatricians, who apparently feel that the conversion of non-reactors to tuberculin to reactors, even by the use of an avirulent bovine culture, would handicap them in their attempts to diagnose clinical tuberculosis in children. If the program called for the wholesale immunization of the entire school population, this objection might be valid. However, since it is contemplated to limit the use of BCG vaccine strictly to high incidence areas and contacts who are still negative, it seems likely that the pediatricians would not find their problem in this regard a serious matter.

Use of BCG vaccine is of course only one factor in the battle against tuberculosis. It is perhaps a relatively minor one, yet the final, virtual elimination of this disease will come about in the reasonably near future only through the use of every known method of tuberculosis control.

Sidney J. Shipman, M.D.,
San Francisco,
March 15, 1948.

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NOTICES AND REPORTS

Council Action on Rebates

At its meeting of February 21-22, 1948, the Council of the California Medical Association received an open letter which was addressed to it and to the Council of the Los Angeles County Medical Association by the Los Angeles Radiological Society, a unit of the Los Angeles County Medical Association. The Council of the C.M.A., after due consideration, voted unanimously that this letter should be published, as requested, and that a further note should be added to it, to indicate the actions already taken by the official Councils of both the California Medical Association and the Los Angeles County Medical Association.

The letter from the Los Angeles Radiological Society follows:

AN OPEN LETTER TO THE COUNCIL OF THE L.A.C.M.A. AND THE C.M.A.

Members of our Section have regretted as much as anyone the publicity necessary to abolish secret rebating. To this group, which has been working continuously against such discreditable practices for more than 20 years, it seems regrettable that some County Medical members seem more interested in seeking out someone to criticize for the publicity than in cooperating in the attempt to eradicate the evil which caused it.

Although some of the criticism has been a matter of self interest, there are a good many who state that "something" should have been done by "somebody" by "some other method" to end these disreputable practices. Unfortunately, with medical government as with civil government, many of our most reputable citizens follow the path of least resistance and leave the work to others. Those who do not realize that every available means has been tried over the years by numerous groups and individuals to get rebating abolished without the use of outside help are entitled to know some of the facts of life pertaining to medical government so that such conditions will not again arise.

The recent anti-rebating resolution of the Council of the Los Angeles County Medical Association is an excellent step but previous resolutions have failed because their effort has been nullified by pressure groups and because our by-laws contain no effective machinery for discipline. Although we often admit 50 to 60 members at a time, only a handful have been expelled for breaches of discipline during the last decade—a fact which is well known to those who travel on the borderline.

Those of us in a position to see the sad results to the public of the x-ray rebating groups—none of which are operated by certified radiologists, and many of which are operated purely as a business venture by laymen—are particularly anxious to see effective legislation in the A.M.A. and its component parts as well as in the legislature to end all rebating schemes once and for all. The "once-over-lightly" examination offered by such groups means undiagnosed early cancers, diagnoses of tuberculosis which never existed, with monthly chest check-up examinations being recommended, and as many as 52 x-ray treatments for unsuitable diseases such as varicose veins with resultant permanent skin damage. These examples are but a few of the tragic results to the patient which occur when medicine is regarded as a commercial enterprise to be driven as a trade instead of practiced as a profession.

Efforts to improve the future must necessarily take into account the failures of the past. In fairness to the facts several powerful influences must be mentioned. One large laboratory which has recently denounced rebating and has simultaneously reduced its fee schedule by 25 per cent, has for many years, as now—which reference to the Los Angeles County Medical Bulletin will show—had at least one member of its "Advisory Board" on the Council of the Los Angeles County Medical Association.

No matter how conscientious some members of the Los Angeles County Council have been, or how well intended their countless resolutions in the past, strong but unrelenting pressure from a minority has rendered attempts to abolish rebating ineffective.

Similar tactics by an interested minority—a coalition of rebaters who hired a lobbyist—effectively killed in committee an anti-rebating bill which was before the Legislature last spring.

It is not to be wondered that after six years of attempting to work with the Los Angeles County Council, including some four conferences during 1947, plus having legislation defeated as noted above, the manager of the Better Business Bureau became discouraged.

When last month after 24 members preferred formal charges of rebating against another member, the present newly-elected County Council took upon itself the authority to suppress the charges without a trial, the Better Business Bureau seemed to have decided that only the weight of public opinion would force a change. It certainly did!

This very same Council within less than two weeks developed what was described editorially in the County Bulletin as sufficient "intestinal fortitude" to pass a suitable resolution with "teeth in it."

We point out the mistakes of the past so that they may be avoided in the future. We are much more interested in having a satisfactory procedure developed to make sure that the "teeth" are of the permanent and not the deciduous variety. We believe that the present resolution is likely to be no more effective than the previous ones unless supplemented by workable machinery for discipline. To this end we respectfully suggest:

1. A grievance committee as recommended in the Rich Report. This study, made at the request of the A.M.A. and some of the state societies, pointed out that the very worst public relations were promoted by the "erring brothers" in the medical profession. It suggests a grievance committee to be composed of doctors who would investigate and press charges preferred from within or without the Society.

2. The County Society Council should be denied the right—so recently exercised by the present Council—of suppressing formal charges without trial. The right of appeal to the C.M.A. and the A.M.A. should be granted to anyone.

3. To restore public confidence, the County Council should make a clear statement of policy to the effect that patients will be expected to pay for services to the individual who renders them. Laboratories or doctors should not act as collection agencies for others.

Such systems of credits and accounts have resulted in abuses in the past. Already one laboratory which has renounced rebating offers to charge 25 per cent less if the patient does not come to the laboratory. With x-ray work this is patently ridiculous. Other similar institutions invite doctors to establish "charge accounts" for x-ray and clinical laboratory work and furnish a schedule, apparently for display to the patient, from which the doctor is told he can deduct 25 per cent. Such practices open both the doctor and laboratory to the suspicion of the public that secret rebating still exists, and perhaps not without reason, for in the past credits and charge accounts have served as ruses for rebating. Such practices should be promptly outlawed by the Council.

We would greatly appreciate your publishing this letter in the organ of your organization.

Executive Committee
Los Angeles Radiological Society

Roy L. Fielder, M.D., *President*
Moris Horwitz, M.D., *Secretary*
Wilbur Bailey, M.D., *Treasurer*
Wybren Hiemstra, M.D.
Donald Laing, M.D.

Resolutions on Rebates

The Council of the California Medical Association also wishes to call to the attention of all members two paragraphs in the resolution adopted by the C.M.A. Council on December 21, 1947, these paragraphs reading as follows:

"In its continued efforts to protect the public, the California Medical Association serves emphatic notice that it is both unjust and a violation of medical ethics for doctors to receive rebates of any portion of fees or costs of medical appliances, drugs, eye glasses, x-ray and laboratory procedures which have been prescribed or recommended by them: it is equally unethical for physicians to give or to participate in rebates of fees.

"The public should be advised that an ethical doctor bills his patients directly for his services and cannot receive other recompense under any guise whatever."

The resolution adoped by the Council of the Los Angeles County Medical Association in a special meeting held January 15, 1948, reads as follows:

"*Be It Resolved:* That any physician who accepts a rebate is guilty of unethical conduct and such conduct is incompatible with membership in the Los Angeles County Medical Association.

"As the term 'rebate' is used herein, it means money, credits, or anything of value, which is received, directly or indirectly, in any guise whatever, by the referring physician from any person, partnership, or corporation, profit, non-profit, or cooperative, to whom a patient or any person is referred or sent for medical or laboratory services, or for medical or professional device, equipment, materials, or supplies."

Council Meeting Minutes

Tentative Draft: Minutes of the 348th Meeting of the Council of the California Medical Association, Los Angeles, February 21-22, 1948.

The meeting was called to order by Chairman Bruck at 10:00 a.m., Saturday, February 21, 1948, in Conference Room No. 6 of the Biltmore Hotel, Los Angeles.

1. *Roll Call:*

Present were President Cline, President-Elect Askey, Speaker Alesen, Vice-Speaker Charnock, Council Chairman Bruck and Councilors Shipman, Ball, Crane, Henderson, Anderson, Kneeshaw, Lum, MacDonald, Green, Cherry, MacLean, Hoffman, Bailey and Thompson. Councilors absent: none. Councilors ex-officio absent, Secretary Garland and Editor Wilbur (illness).

Present by invitation were Executive Secretary Hunton; Legal Counsel Hassard; Assistant Executive Secretary Wheeler; Public Relations Counsel Whitaker; Ben H. Read, Executive Secretary of the Public Health League of California; Mr. Ed Clancy, assistant to Mr. Whitaker; and county society executive secretaries Kihm of San Francisco, Venables of Kern, Waterson of Alameda and Donovan of Santa Clara. Present by invitation during part of the meeting were Dr. C. L. Cooley and Mr. W. M. Bowman, Secretary and Executive Director of California Physicians' Service and Drs. Donald Cass and J. F. Doughty, members of the Board of Trustees of C.P.S.

2. *Approval of Minutes:*

(a) On motion duly made and seconded, minutes of the 206th meeting of the Executive Committee, held January 13, 1948, were approved.

(b) On motion duly made and seconded, minutes of the 207th meeting of the Executive Committee, held January 18, 1948, were approved.

(c) On motion duly made and seconded, minutes of the 347th meeting of the Council, held December 20-21, 1947, were approved.

3. *Membership:*

(a) A report showing 3,735 dues-paid active members as of February 20, 1948, was received.

(b) On motion duly made and seconded, one member whose 1947 dues had been received since the last Council meeting was ordered reinstated as an active member.

(c) On motion duly made and seconded in each instance, the following eleven nominees were elected as Associate members:

Ellen Brown, Alameda County.
Wallace M. Chapman, Alameda County.
Virginia L. Cull, Alameda County.
Edwin H. Lennette, Alameda County.
Julius J. Simon, Alameda County.
Martin L. Stephenson, Alameda County.
Herbert R. Stolz, Alameda County.
G. Otis Whitecotton, Alameda County.
F. H. Garrett, Ventura County.
R. F. Scherb, Ventura County.
W. E. Whalen, Ventura County.

(d) On motion duly made and seconded in each instance, the following twenty members were elected to Retired Membership:

Henry Wahle, Alameda County.
Lewis H. Athon, Los Angeles County.
John R. Buckingham, Los Angeles County.
H. C. Bumpus, Los Angeles County.
Lucius W. Case, Los Angeles County.
Herbert T. Cox, Los Angeles County.
John B. Dooley, Los Angeles County.
George O. Gordon, Los Angeles County.
Charles H. Gowan, Los Angeles County.
Henry B. Lemere, Los Angeles County.
A. L. Maclennan, Los Angeles County.
Carl H. Parker, Los Angeles County.
Edward N. Reed, Los Angeles County.
J. M. Wheelis, Los Angeles County.
J. M. Burlew, Orange County.
Lloyd A. Burrows, Orange County.
Alfred Shryock, San Bernardino County.
Alfred L. Phillips, Santa Cruz County.
George A. Broughton, Ventura County.
J. A. Mahan, Ventura County.

(e) A motion was duly made and seconded that Harold Behneman of Riverside County be elected to Life Membership. Motion lost, No affirmative votes.

A motion was duly made and seconded that Elmer Belt of Los Angeles County be elected to Life Membership. Motion lost. No affirmative votes.

A motion was duly made and seconded that F. E. Blaisdell of Santa Cruz County be elected to Life Membership. Motion lost. No affirmative votes.

On motion duly made and seconded, William A. Boyce of Los Angeles County was elected to Life Membership.

A motion was duly made and seconded that Edwin F. Boyd of Los Angeles County be elected to Life Membership. Motion lost. No affirmative votes.

On motion duly made and seconded, John Mackenzie Brown of Los Angeles County was elected to Life Membership.

A motion was duly made and seconded that O. W. Butler of Los Angeles County be elected to Life Membership. Motion lost. No affirmative votes.

On motion duly made and seconded, John N. Chain of Humboldt County was elected to Life Membership.

On motion duly made and seconded, H. H. Chamberlain of Los Angeles County was elected to Life Membership.

A motion was duly made and seconded that Hugo Childress of Sacramento County be elected to Life Membership. Motion lost. No affirmative votes.

On motion duly made and seconded, Fred B. Clark of Los Angeles County was elected to Life Membership.

On motion duly made and seconded, Harry W. Coffin of Los Angeles County was elected to Life Membership.

On motion duly made and seconded, G. Glass Davitt of Los Angeles County was elected to Life Membership.

On motion duly made and seconded, George Dock of Los Angeles County was elected to Life Membership.

A motion was duly made and seconded that Ehler Eiskamp of Santa Cruz County be elected to Life Membership. Motion lost. No affirmative votes.

A motion was duly made and seconded that James L. Faulkner of Tehama County be elected to Life Membership. Motion lost. No affirmative votes.

On motion duly made and seconded, Morris J. Gates of Santa Cruz County was elected to Life Membership.

A motion was duly made and seconded that Hans H. Gerisch of Los Angeles County be elected to Life Membership. Motion lost. No affirmative votes.

A motion was duly made and seconded that Albert C. Germann of Los Angeles County be elected to Life Membership. Motion lost. No affirmative votes.

On motion duly made and seconded, Thomas Glenn of Los Angeles County was elected to Life Membership.

On motion duly made and seconded, Etta Gray of Los Angeles County was elected to Life Membership.

On motion duly made and seconded, George P. Laton of Los Angeles County was elected to Life Membership.

On motion duly made and seconded, L. M. Liles of Santa Cruz County was elected to Life Membership.

A motion was duly made and seconded that Lawrence R. Linhart of Los Angeles County be elected to Life Membership. Motion lost. No affirmative votes.

On motion duly made and seconded, T. C. Low of Los Angeles County was elected to Life Membership.

A motion was duly made and seconded that James B. Luckie of Los Angeles County be elected to Life Membership. Motion lost. No affirmative votes.

A motion was duly made and seconded that W. P. Magan of Los Angeles County be elected to Life Membership. Motion lost. No affirmative votes.

On motion duly made and seconded, F. S. Marnell of Santa Cruz County was elected to Life Membership.

A motion was duly made and seconded that O. C. Marshall of Santa Cruz County be elected to Life Membership. Motion lost. No affirmative votes.

A motion was duly made and seconded that W. G. Milholland of Fresno County be elected to Life Membership. Motion lost. No affirmative votes.

A motion was duly made and seconded that Richard F. Mogan of Los Angeles County be elected to Life Membership. Motion lost. No affirmative votes.

On motion duly made and seconded, Gilbert R. Owen of Los Angeles County was elected to Life Membership.

A motion was duly made and seconded that Edwin F. Patton of Los Angeles County be elected to Life Membership. Motion lost. No affirmative votes.

On motion duly made and seconded, F. M. Pottenger of Los Angeles County was elected to Life Membership.

On motion duly made and seconded, J. E. Pottenger of Los Angeles County was elected to Life Membership.

On motion duly made and seconded, O. B. Sheets of Los Angeles County was elected to Life Membership.

On motion duly made and seconded, Kirby B. Smith of Alameda County was elected to Life Membership.

On motion duly made and seconded, Grant Gould Spear of Los Angeles County was elected to Life Membership.

On motion duly made and seconded, William E. Stevens of San Francisco County was elected to Life Membership.

A motion was duly made and seconded that Hugh J. Strathearn of Los Angeles County be elected to Life Membership. Motion lost. No affirmative votes.

A motion was duly made and seconded that N. R. Sullivan of Santa Cruz County be elected to Life Membership. Motion lost. No affirmative votes.

On motion duly made and seconded, Emil Tholen of Los Angeles County was elected to Life Membership.

A motion was duly made and seconded that Packard Thurber of Los Angeles County be elected to Life Membership. Motion lost. No affirmative votes.

On motion duly made and seconded, Carl T. Wallace of Humboldt County was elected to Life Membership.

On motion duly made and seconded, Charles A. Warmer of Los Angeles County was elected to Life Membership.

On motion duly made and seconded, A. H. Weitkamp of Los Angeles County was elected to Life Membership.

A motion was duly made and seconded that D. S. Woodard of Santa Cruz County be elected to Life Membership. Motion lost. No affirmative votes.

4. *Financial:*

(a) Financial reports showing bank balances as of February 20, 1948, receipts and expenditures for January and for the seven months ended January 31, 1948, and the balance sheet as of January 31, 1948, were received.

(b) On motion duly made and seconded, it was voted to invest $150.000 of current cash funds in U.S. Treasury 2½ per cent bonds and to turn these bonds over to the Trustees of the California Medical Association. Dr. Shipman's negative vote on this motion is herewith recorded.

5. *Blood Banks:*

Dr. Bruck reported that the C.M.A. Blood Bank Commission was engaged in a survey of all county medical societies, to determine what blood bank facilities existed in each county and under what sponsorship or control. He pointed out that in one county, where the county medical society was presumed to be a participant in the program, the American Red Cross had seen fit to omit any reference to the county society in its literature and publicity.

Dr. Bruck expressed the belief that the Blood Bank Commission, possibly augmented by additional appointments, should be continued and on motion duly made and seconded, it was so ordered.

6. *Rebates:*

Discussion was held on the recent statements of the Association regarding rebate practices. A letter from Dr. Richard O. Bullis, Secretary of the Los Angeles County Medical Association, was read, in which attention was called to a resolution adopted by that Association's Council in its meeting of January 15, 1948, calling the attention of the C.M.A. Council to alleged misstatements issued by public relations counsel for the C.M.A. A letter addressed to the Councils of the Los Angeles County Medical Association and the California Medical Association by the Los Angeles Radiological Society, a division of the Los Angeles County Medical Association, was also read.

Legislation introduced in the 1947 Legislature was also discussed and it was brought out that one or more members of the Board of Medical Examiners had reportedly been opposed to this measure and this attitude had resulted in legislative votes against the proposal. On motion by Dr. Bailey, seconded by Dr. Cline, the following resolution was unanimously adopted:

WHEREAS, The California Medical Association has long been on record as favoring legislation to abolish all types of rebating practices, and,

WHEREAS, At the time of the hearing of an anti-rebating bill in 1947 members of the legislature who were on the committee hearing the bill made the statement that they had been informed that a member of the Board of Medical Examiners was against this bill, and that they were accordingly voting against it, and

WHEREAS, As recent newspaper publicity has conclusively shown, the public is righteously indignant that such practices have so long been tolerated by organized medicine, and

WHEREAS, In the minds of both the public and the legislators, the State Board of Medical Examiners' opinion on legislation is of very great importance, now, therefore, be it

Resolved, That the Council of the California Medical Association makes this formal request of the State Board of Medical Examiners to make public the attitude of its members on the subject of rebating practices, and, if necessary, to take a roll call vote on such a decision which will also be publicized in order that when further attempts at legislation to control rebating practices are made, there will be no doubt in the minds of any of the legislators as to whether each individual member of the Board is in favor of rebating or against it.

On motion by Cline, seconded by Kneeshaw, it was unanimously voted that the Chairman appoint a Council committee to review the statements of the Council and of public relations counsel to determine if such statements were adequate and accurate.

7. *Committee on Industrial Practice:*

(a) A letter from the Sonoma County Medical Society was read, in which the Council was urged to introduce legislation to provide free choice of physician by injured employees coming within the industrial compensation laws. On motion duly made and seconded, it was voted to instruct the executive secretary to notify the Sonoma County Medical Society that the Council has reviewed this situation, that this legislation could not be introduced in the 1947 Legislature because of the lack of time before the close of the legislative session, and that the instructions of the House of Delegates (1947) will be carried out.

(b) A letter from Dr. Peter Blong, Chairman of the Committee on Associated Societies and Technical Groups, was read, in which he recommended that standing orders for industrial nurses be approved for posting in industrial establishments where a physician was not on duty during all working hours. Discussion of this proposal brought the opinion from legal counsel that the existence of standing orders could not be construed as giving a nurse authority to perform services for which she was not licensed or trained.

On motion duly made and seconded, it was voted that the following resolution be adopted:

WHEREAS, The posting and following of standing orders for nurses cannot take the place of a physician, and

WHEREAS, The maintenance of standing orders for nurses may lead to the assumption by the nurse of diagnostic and therapeutic procedures for which she is not trained, qualified or licensed, and

WHEREAS, Nurses are qualified and licensed to act in real emergencies and are able to secure a physician without undue loss of time where his professional services are needed; now, therefore, be it

Resolved, That the Council of the California Medical Association hereby expresses its opposition to the practice of posting standing orders for nurses in industrial or other establishments.

(c) A suggestion that a nurse be given a place on the Association's Annual Session program was received and it was noted that the 1948 program is already full.

(d) A suggestion was received that the Association sponsor essays among school students on the subject of health insurance. After discussion, it was

duly moved, seconded and voted that public relations counsel contact state educational authorities to determine their attitude on this subject and draw up suitable material for the use of students in their own debating and essay requirements, notifying the county medical societies that such material is available.

(e) Dr. Donald Cass, chairman of the Committee on Industrial Practice, reported that his committee has received a number of suggestions for possible revision of the schedule of fees adopted by the Industrial Accident Commission and would review all suggestions with the thought of preparing a revised schedule for presentation to the Commission, if the Council approves.

(f) Mr. Hunton reported on a case where a member, with the aid of the Association, had filed claim for a surgical fee higher than the minimum fee in the present schedule and where the insurance carrier had reduced his request to the minimum. The Commission held a hearing and awarded the higher fee to the physician, the first known case where the fee claims procedure of the Commission has been tested.

8. *California Physicians' Service:*

Dr. C. L. Cooley, Secretary of C.P.S., reported that several Delegates to the C.M.A. have already taken a tour of the new C.P.S. offices in San Francisco and that all Delegates were being invited to do so during the 1948 Annual Session. He also reported that there were 8,722 physician members of C.P.S. as of February 20, 1948, and that the Veterans' Administration program was now operating on a cost-plus basis for expenses and was proceeding smoothly. Where existing membership groups are being reopened for added members, Dr. Cooley stated that a statement of health was being required from new applicants and that 35 per cent of such applicants are being rejected because of poor health risks.

Mr. William M. Bowman, Executive Director of C.P.S., distributed a financial statement of C.P.S. as of January 31, 1948, which reflected a balance of $65,446 in the stabilization fund, the first time that this account has shown a favorable balance. Mr. Bowman stated that physicians' statements are now being paid without delay and that operating expenses are 16.2 per cent of gross revenues and are declining to an even lower level. In response to questions from members of the Council, he stated that an increase in unit value would necessarily have to be decided by the Board of Trustees; in reply to a second question, he stated that C.P.S. was working on development of an individual membership contract and that he anticipated some announcement on this might be ready late in 1948.

9. *Legal Department:*

Mr. Hassard reported that the Railway Mediation Board had ruled in favor of the Association of Santa Fe Coast Lines Physicians in holding them to be within the jurisdiction of the Railway Labor Board. Within the past few days a contract had been signed between the physicians in this group and the board of directors of Santa Fe Hospital Association, in which the matter of compensation of physicians was left open pending negotiation; if negotiation fails, either side may ask the Railway Mediation Board to take up this question. On motion duly made and seconded, it was voted to continue in existence the committee which has been conferring with the Santa Fe physicians and that additional members be appointed to this committee if advisable.

Mr. Hassard also brought up the recent ruling of the State Board of Equalization to the effect that hospitals which employed professional personnel on a compensation basis higher than that in public hospitals could not be considered tax-exempt. The Association of California Hospitals has stated its intention to work for the repeal of that particular section of the non-profit hospital law. On motion duly made and seconded, Mr. Hassard was authorized to work with counsel for the Association of California Hospitals in this regard, subject to approval by the chairman of the Committee on Public Policy and Legislation.

Mr. Hassard reported on a recent decision of the Second District Court of Appeals which held that the taking of x-ray films in fracture or suspected fracture cases should be considered a matter of "judicial notice" to be followed by all physicians and not a matter of professional judgment to be determined by expert testimony in case of dispute. On motion duly made and seconded, it was voted to authorize legal counsel to follow this case and to file a brief as *amicus curiae* on behalf of the Association if the case is carried to the Supreme Court.

10. *Recess and Executive Session:*

At this point the Council went into executive session, with Messrs. Hunton, Hassard, Read, Whitaker and Clancy remaining by request.

11. *New Mexico Physicians' Service:*

Mr. Hunton read a letter he had recently received from New Mexico Physicians' Service in which the difficulties of that organization since its start in business in April, 1946, were outlined, warm thanks were expressed to the California Medical Association for the encouragement and financial assistance extended through loans, and a check for $500 as the first repayment of the existing loan was enclosed. The letter stated that New Mexico Physicians' Service and its affiliate, Affiliated Hospital Plan, were operating with great satisfaction to all concerned and that it was the hope of the physicians heading these plans to make more substantial repayments to the C.M.A. in the future.

12. *Recess:*

At this point, 6:45 p.m., the Council recessed until 9:30 a.m. Sunday, February 22, 1948.

13. *Reconvention:*

The Council reconvened at 9:30 a.m., Sunday, February 22, 1948, in Conference Room No. 6 of the Biltmore Hotel, Los Angeles.

14. *Roll Call:*

All officers and Councilors noted present on February 21 were present. Also present by invitation were Messrs. Hunton, Hassard, Wheeler, Read, Whitaker, Clancy, Kilm, Waterson, and Donovan. Present during a portion of the day, by invitation, were Dr. Wilton L. Halverson, State Director of Public Health; Dr. Lyell C. Kinney, Chairman of the C.M.A. Cancer Commission, and Dr. Dwight H. Murray, Chairman of the Committee on Public Policy and Legislation.

Present as luncheon guests were Hon. Goodwin Knight, Lieutenant Governor of California, and Hon. Sam L. Collins, Speaker of the Assembly of the California Legislature.

15. *Benevolence Committee:*

Dr. Anderson, Chairman of the C.M.A. Benevolence Committee, read correspondence which he had had with Dr. Elizabeth Mason-Hohl, in his endeavor to ascertain if the retirement home planned by the Los Angeles County Physicians' Aid Association would be open to receive needy physicians' cases from other counties. He also reported that the Los Angeles County Physicians' Aid Association had decided not to attempt the award of door prizes at the C.M.A. 1948 Annual Session. Upon motion duly made and seconded, this report was ordered received, Dr. Anderson commended for his efforts and instructed to continue working with the Los Angeles County group in an effort to iron out any differences of opinion which might exist between the two committees.

Dr. Anderson stated that Dr. Robert A. Peers, a member of the Benevolence Committee, wished to terminate his membership on the committee and it was agreed that a replacement should be considered at the time of the Annual Session.

16. *California Medicine:*

Mr. Hunton reported that a vacancy existed on the Editorial Board of California Medicine due to the death of Dr. Clark Johnson, urologist. On nomination duly made and seconded, Dr. Lyle Craig of Pasadena was elected to this position.

Mr. Hunton was then asked the reasons for the withdrawal of California Medicine from the Cooperative Medical Advertising Bureau of the A.M.A., an action which drew editorial comment in the Journal A.M.A., issue of February 7, 1948. He outlined the steps behind this withdrawal, described the present system of soliciting advertising and told the mechanics of the Advertising Committee, which passes on proffered advertising of products not accepted by A.M.A. Councils. Dr. Murray, a Trustee of the A.M.A., stated that this matter had been discussed at the A.M.A. Trustees' meeting of February 19-20 and no further action was planned.

17. *American Medical Association:*

Dr. Murray stated that the Trustees of the A.M.A. had sent a congratulatory cable to the British Medical Association for the stand that Association had taken in opposition to the socialization of medicine in Great Britain. He also reported that plans were being laid to secure, if possible, the deduction for income tax purposes of some fixed maximum annual amount of premiums or payments by physicians for establishing their own retirement pension plans.

18. *California State Department of Public Health:*

Dr. Wilton L. Halverson, State Director of Public Health, placed before the Council a digest of a program adopted by a joint committee representing the American Medical Association, American Public Health Association, American Public Welfare Association and American Hospital Association, for a uniform public health program. This outline was discussed at length, particularly as to its possible impingement on the private practice of medicine, and the Council Chairman, who serves as a member of the Advisory Committee to the State Department of Health in considering this program, was authorized to continue his work with this committee.

19. *Cancer Commission:*

Dr. Lyell C. Kinney, chairman of the C.M.A. Cancer Commission, stated that Dr. Lester Breslow of the State Department of Public Health, had asked the members of the Cancer Commission to serve in an advisory capacity in the consideration of the program noted in item 18. This request was approved by the Council.

Dr. Kinney also reported that Dr. Frederick Hook, U.S.N. (Retired), had been employed by the Cancer Commission as its Medical Director and would work jointly for the Cancer Commission and for the American Cancer Society, California Division. His salary is to be $12,000 annually, half of which would be paid directly by the American Cancer Society and half by the C.M.A., with the understanding that the American Cancer Society would make a grant to the C.M.A. of any amount in excess of a salary figure permissible under the Cancer Commission's existing budget. This was estimated to be about $3,000 annually, which would mean a grant from the American Cancer Society to the C.M.A. of $3,000 annually to be applied toward Dr. Hook's salary. This arrangement was approved by the Council.

The Council also approved the maintenance of an office by Dr. Hook in the San Francisco office of the American Cancer Society at 467 O'Farrell Street.

20. *Woman's Auxiliary to the C.M.A.:*

Dr. Cline, a member of the C.M.A. Advisory Committee to the Woman's Auxiliary to the C.M.A., outlined proposed changes in the Constitution of the Auxiliary and on motion duly made and seconded, the Council voted to approve these proposals for submission to the Auxiliary for adoption or rejection.

21. *Palo Alto Clinic:*

A proposal was presented by the Palo Alto Clinic for the inauguration of a panel system of medical care for the students of Menlo Junior College and Menlo School, the panel to be open to all qualified physicians within a specified radius of the school and the funds, collections, etc., to be managed by the Palo Alto Clinic and disbursed semi-annually on a basis of fee units. Palo Alto Clinic stated that the Santa Clara County Medical Society had approved such a contract in principle but the San Mateo County Medical Society had not; approval in principle by the Council was requested. On motion duly made and seconded, it was voted that the Palo Alto Clinic be notified that the Council sees no immediate objection to the proposal but that the Council must see the actual proposed contract before it can give any approval. Dr. MacDonald recorded as voting no.

22. *Public Relations:*

Mr. Whitaker reported that a bill to provide reapportionment of the State Senate on a population basis was being prepared as an initiative, that such a measure was inimical to business and professional interests and was being sponsored by labor interests. He urged that all physicians be notified of this measure and asked to oppose it on the ballot.

23. *Public Policy and Legislation:*

Dr. Murray and Mr. Read reported that both state and national primaries scheduled for June and elections for November would be most important and should be carefully watched.

Regarding the proposed rebate bill, on motion duly made and seconded, Mr. Hassard was authorized to meet with Mr. Robert Bauer of the Better Business Bureau of Los Angeles and Mr. Don Keller, District Attorney of San Diego County, and to notify them that the C.M.A. intended to prepare, introduce and work for enactment of a bill of its own drafting. This meeting is scheduled for February 23, 1948.

24. *New and Miscellaneous Business:*

(a) A request from the Investors League for financial support was received and ordered filed.

(b) Referring back to the program proposed by the State Department of Public Health, it was agreed that the public health program of the department for chronic illnesses should be initiated only after application of a means test and with the understanding that the Department should not enter into the practice of medicine in promoting or guiding such a program (see item No. 18).

(c) Re: C.M.A. employees' retirement plan. Dr. Charnock, chairman of a special committee, reported on proposals made by several underwriters for inauguration of a retirement pension plan for C.M.A. employees. On motion duly made and seconded, it was voted that an employee retirement plan be approved in principle, details to be worked out by the committee and made available to all members of the Council for their study prior to the next Council meeting.

(d) A request from the California Society for Crippled Children for approval of a proposed epilepsy program by that society was considered and it was moved, seconded and voted that this program be checked further with members of the Advisory Medical Committee of the Society before any action is taken.

(e) National Society for Medical Research. A request from this organization for financial support in its campaign to combat antivivisection movements was read and it was regularly moved, seconded and voted that the C.M.A. contribute $500 to this cause.

(f) California Community Health Education Project: Dr. Cline read a request from the California State Department of Education for a representative of the C.M.A. to attend meetings of the California Community Health Education Project in Yosemite Park, March 4 to 6. It was regularly moved, seconded and voted that the chairman designate a representative of the Association to attend this meeting.

(g) California Tuberculosis and Health Association: Dr. Askey read a report of a meeting between a special committee of the Council and a similar committee of the California Tuberculosis and Health Association, in which agreement was reached on various aspects of the program of the Tuberculosis Association which had been criticized by physicians. Dr. Askey stated his belief that the governing board of the Tuberculosis Association would adopt the proposed program changes and he urged that the Association continue its cooperation with the Tuberculosis Association. On motion duly made and seconded, Dr. Askey was commended for his work with this committee and the committee was ordered continued.

(h) Veterans' Administration: A complaint against a California physician who was accused of overtreating Veterans' Administration patients was read and discussed. The correspondence indicated that the matter had already been referred back to the Veterans' Administration and that no action was indicated at this time; if any action is to be taken against the physician, legal counsel ruled that it must originate with the county society where the doctor holds membership.

25. *Executive Session:*

At this point the Council reentered executive session, Messrs. Hassard, Read, Whitaker and Clancy remaining by request.

26. *Rise from Executive Session:*

At this point the Council rose from executive session.

27. *Time and Place of Next Meeting:*

It was voted to hold the next Council meeting at 10 a.m., Saturday, April 10, 1948, in the St. Francis Hotel, San Francisco.

Adjournment.

In Memoriam

Bonn, Harry Kraylor. Died in Los Angeles, January 9, 1948, age 60, of a heart ailment. Graduate of the Indiana University School of Medicine, Bloomington-Indianapolis, 1908. Licensed in California in 1922. Doctor Bonn was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

✤

Dyke, Louis Henry, Jr. Died in Berkeley, February 3, 1948, age 38, of a heart attack. Graduate of the University of California School of Medicine, Los Angeles, 1937. Licensed in California in 1937. Doctor Dyke was a member of the Alameda County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

✤

Hanford, Frank Wood. Died in Van Nuys, January 24, 1948, age 78, of coronary disease with infarction. Graduate of the Bennett College of Eclectic Medicine and Surgery, Chicago, Illinois, 1905. Licensed in California in 1914. Doctor Hanford was a retired member of the Los Angeles County Medical Association and the California Medical Association.

✤

Hamilton, James Kiah. Died in Alameda, December 17, 1947, age 67, of coronary occlusion. Graduate of the University of California Medical School, Berkeley-San Francisco, 1903. Licensed in California in 1904. Doctor Hamilton was a retired member of the Alameda County Medical Association, the California Medical Association, and an Affiliate Fellow of the American Medical Association.

✤

Harral, Pinckney. Died in Mesa, Arizona, January 4, 1948, age 40, of burns. Graduate of Northwestern University Medical School, Chicago, Illinois, 1933. Licensed in California in 1933. Doctor Harral was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

✤

Hastings, Hill. Died in Los Angeles, February 14, 1948, age 74, of bronchial pneumonia. Graduate of the University of Virginia Department of Medicine, Charlottesville, 1895. Licensed in California in 1901. Doctor Hastings was a retired member of the Los Angeles County Medical Association, the California Medical Association, and an Affiliate Fellow of the American Medical Association.

Miller, Thatcher. Died in San Diego, January 29, 1948, age 62. Graduate of the College of Physicians and Surgeons of Baltimore, Maryland, 1906. Licensed in California in 1918. Doctor Miller was a member of the San Diego County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

✤

O'Connor, James Hunt. Died in San Francisco, February 2, 1948, age 78, following a long illness. Graduate of the Cooper Medical College, San Francisco, 1895. Licensed in California in 1895. Doctor O'Connor was a retired member of the San Francisco County Medical Society, the California Medical Association, and an Affiliate Fellow of the American Medical Association.

✤

O'Connor, Thomas Hunt. Died in San Francisco, February 4, 1948, age 68, of a cerebral hemorrhage. Graduate of the Cooper Medical College, San Francisco, 1908. Licensed in California in 1908. Doctor O'Connor was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

✤

Oftedal, Sverre. Died in Glendale, February 5, 1948, age 64. Graduate of Rush Medical College, Illinois, 1911. Licensed in California in 1929. Doctor Oftedal was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

✤

Overend, Edmund J. Died in Oakland, February 24, 1948, age 93. Graduate of the Medical College of the State of South Carolina, Charleston, 1883. Licensed in California in 1884. Doctor Overend was a retired member of the Alameda County Medical Association, and the California Medical Association.

✤

Wells, George Dillard. Died in Los Angeles, February 9, 1948, age 63. Graduate of Barnes Medical College, St. Louis, Missouri, 1911. Licensed in California in 1923. Doctor Wells was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

✤

Yost, Francis Oliver. Died in Los Angeles, January 30, 1948, age 77. Graduate of Harvard Medical School, Boston, Massachusetts, 1893. Licensed in California in 1893. Doctor Yost was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

NEWS and NOTES

NATIONAL • STATE • COUNTY

ALAMEDA

To assist in overcoming the shortage of nurses, the Woman's Auxiliary to the Alameda County Medical Association is promoting a poster prize contest designed to attract high school girls to nursing as a profession. Under the direction of Mrs. Samuel P. Hall, the campaign is being carried on through the art departments of high schools in Alameda County. Cash prizes are offered for the best posters calling attention to the high purposes of the nurse's profession. Members of the Auxiliary are assigned to stimulate interest in the contest in each high school in the county. Prizes will be awarded for the best poster in each school, as well as for the best, second best and third best in the entire county.

BUTTE

Dr. W. J. Perry of Chico has been appointed assistant medical director of the Butte County Hospital by the county board of supervisors. The appointment was made to relieve Dr. Gaylord Boom, medical director of the hospital, of part of an increasing work load.

IMPERIAL

Dr. Richard Mattox, formerly of Fresno, last month was appointed County Physician by the Imperial County Board of Supervisors to take over the duties of Dr. Burke Schoensee, who resigned that post to enter private practice. Dr. Schoensee will continue, however, to serve as County Health Officer.

LOS ANGELES

Dr. Howard Webster Fleming of Laguna Beach has been appointed a member of the State Board of Medical Examiners by Governor Earl Warren.

SAN DIEGO

Following a campaign by the medical profession and the Better Business Bureau, the San Diego City Council has adopted an ordinance making it a misdemeanor to offer or accept a rebate in connection with the sale of medical goods or the supplying of a medical service. Violation of the ordinance is punishable by a fine of $500 or a six-month jail sentence.

* * *

Dr. William W. Stadel, formerly assistant medical director of the Alameda County Hospital, recently was appointed superintendent of the San Diego County Hospital. Dr. Stadel will take over the new post May 1 upon the retirement of Dr. H. M. Fine, who has been serving as superintendent since March, 1944, under a wartime appointment.

SAN FRANCISO

Promotion of Dr. Sidney Raffel to a professorship in bacteriology was announced recently by Acting President Alvin C. Eurich of Stanford University. Dr. Lowell A. Rantz and Dr. David A. Rytand were made associate professors of medicine; Dr. Lelland J. Rather, Dr. David C. Regnery and Dr. Victor Richards were promoted to assistant professorships in pathology, biological sciences, and surgery, respectively.

* * *

The Stanford Eye Bank, located at the Stanford University Hospital, San Francisco, provided 33 corneas for eye graft operations during its first year of operation.

Loren R. Chandler, M.D., dean of the Stanford Medical School, said that all qualified eye surgeons on the Pacific Coast have been invited to make use of the Eye Bank's facilities.

Although popularly termed an Eye Bank, the organization is really more of a clearing house or central registry where patients in need of corneal transplantation operation and their fellow men willing to offer them a chance for sight can be brought together within a short period. The corneas collected and preserved by the Eye Bank are distributed without cost to either patient or surgeon, except for a small service fee to cover the cost of handling the eye tissue. Full information on the correct procedure for registration of donors can be secured by telephoning the Eye Bank at West 1-8000, or by writing to the Stanford Eye Bank, 2398 Sacramento St., San Francisco.

SANTA BARBARA

Dr. Walter Graham of Santa Barbara has been elected president of the American Hand Society. The Society, which is an organization of physicians and surgeons specializing in correction of injured or otherwise impaired hands, is an outgrowth of work done in this field during the war.

SANTA CLARA

Sixty Santa Clara County physicians in general practice are organizing as a branch of the American Academy of General Practice.

Purposes of the Academy, as outlined by Dr. Stanley R. Truman of Oakland, who is secretary of the national organization, are to promote and maintain high standards of the general practice of medicine and surgery, to encourage and assist young men and women in preparing, qualifying and establishing themselves in general practice, to protect the right of the general practitioner to engage in medical and surgical procedures for which he is qualified, to assist in providing postgraduate courses for general practitioners, and to advance medical science and private and public health.

Dr. Donald R. Threlfall has been named temporary chairman of the Santa Clara County Branch, Dr. Joseph T. Pace acting secretary, and Dr. E. C. Lawrence acting treasurer. Two committees were named, one on membership and the other on postgraduate training. Members of the membership committee are Dr. Thomas L. Blanchard, Dr. James Lovely, Dr. Richard T. Bigotti, Dr. Edward Liston, and Dr. John E. Cox. Dr. Stanley Kneeshaw, Dr. Leland B. Blanchard and Dr. A. R. Currlin make up the committee on education.

TULARE

Addition of another full-time physician to the staff of the Tulare County Hospital has been authorized by the county board of supervisors. Dr. A. E. Gardner, assistant superintendent of the hospital, had urged creation of the $371 a month position in view of a sharp increase in the number of clinic cases coming to the hospital. The board asked Dr. Gardner to work out plans for additions to clinic facilities.

GENERAL

The International Society of Hematology will hold its bi-annual meeting at the Hotel Statler in Buffalo, New York, August 23-26, 1948. All scientific sessions and exhibits will be open to scientists interested in hematology. Those interested in attending the meetings may communicate with Dr. Sol Haberman, secretary, The William Buchanan Blood Center, Baylor Hospital, Dallas, Texas.

* * *

The National Gastroenterological Association will hold its Thirteenth Scientific Session at the Hotel Pennsylvania in New York City, on June 7-10, 1948. The program for the first three days will consist of symposia on gastroduodenal ulcer; ulcerative colitis; jaundice and metabolism, nutrition and allergy. A panel discussion, which will be followed by a "question and answer" period, will cover the topics of diabetic, tuberculous, psychosomatic and cardiac manifestations in gastro-intestinal diseases. The fourth day of the session will be devoted to a clinical day at cooperating hospitals in New York City.

Further details and a copy of the program may be obtained by writing to the secretary, National Gastroenterological Association, 1819 Broadway, New York 23, New York.

* * *

The American Society for the Study of Sterility will hold its Fourth Annual National Session on June 21 and 22, 1948, at the Congress Hotel in Chicago. The two-day program will be divided into a special series of panel discussions on male infertility, with papers to be read on female and miscellaneous infertility aspects on the second day.

The chairman of the session is Dr. Edwin C. Robertson, chairman of the Department of Obstetrics and Gynecology of Queens College, Ontario, Canada.

Additional information may be obtained from the secretary, Dr. John O. Haman, 490 Post Street, San Francisco 2, California.

* * *

Advice from the "grass roots up" on the nation's health needs will be formulated by physicians and other experts at the National Health Assembly to be held in Washington from May 1 to 4.

Called by Federal Security Administrator Oscar R. Ewing to advise him on the health program requested by President Truman, on January 30, the Assembly will enlist the aid of all major health agencies and organizations in formulating the first steps toward practical national health goals for the next ten years.

"One important thing that we hope will come out of the Assembly," said Mr. Ewing, "is a clearer picture of just how much agreement there is in certain supposedly controversial health fields. I have an idea we are going to find that these areas of agreement are larger than many people think. Once we have that established, we can find out how far we can all go forward on a nationwide front."

Dr. Edward L. Bortz, Dr. R. L. Sensenich, and Dr. George F. Lull, respectively president, president-elect, and secretary of the American Medical Association, are among the more than 30 leaders in professional and lay fields who are serving on the National Health Assembly's Executive Committee.

* * *

Twelve authorities on nutrition will present their latest work during a joint meeting of the American Academy of Applied Nutrition and the American Anti-Arthritis Association to be held at the Fairmont Hotel, San Francisco, April 15, 16 and 17, immediately following the California Medical Association meeting. The first day of the meeting will be taken up with registration and the annual business and committee meetings of the Academy, but an invitation is extended to all members of the medical profession to attend the programs of April 16 and 17, which will present the following speakers:

Friday

Dr. David Adlersberg, New York City: Clinical Significance and Recognition of Disturbances of Lipid Metabolism.

Dr. Douglas G. Campbell, San Francisco: Nutrition and Neuroses.

Dr. Sam J. McClendon, San Diego: The Aspects of Malnutrition in Public Health.

Dr. Vernon Luck, Los Angeles: The Pathology of Degenerative and Proliferative Arthritis and its Roentgenographic Correlation.

A program of practical nature for the Associate Membership of the Academy, to be held concurrently with the Friday afternoon scientific session, has been arranged by Dr. M. C. Bennett, and will present the following speakers:

Mr. Horace Dryden, Modesto: The Meaning of Nutrition in Egg and Poultry Production.

Dr. Max Kleiber, Davis: Dietary Deficiencies and Energy Metabolism.

Friday evening at 7 o'clock a banquet will be held for members and their guests at the Fairmont. Dr. George A. Selleck of San Francisco, who is in charge of the banquet menu, will speak on the "Romance of Foods."

Saturday

At 9 a.m., Saturday, the following scientific sessions will be held:

Dr. John Barrow, Los Angeles: Fundamentals in the Treatment of Arthritis.

Dr. James A. Shield, Richmond, Virginia: Soils—Their Nature and Relationship to Health.

Dr. John Bertrand, Berkeley: Isotopes and Their Relation to Nutrition.

Dr. E. O. Essig, Berkeley: Insects in Relation to the Food of Humans.

Concurrently with the Saturday morning scientific sessions, two speakers will appear before the Associate Membership.

Catherine Sheen, Sacramento: The School Lunch Program.

M. A. Joslyn, Berkeley: Food Processing Methods and Their Effect on Nutritive Quality.

For information regarding either the activities of the Academy or membership requirements, inquiries may be addressed to the Business Office of the Academy, 1226 Wilshire Boulevard, Los Angeles 14, California. Hotel reservations at the Fairmont Hotel for the 1948 meeting may be secured through the same office.

INFORMATION

County Medical Societies Called Upon to Meet Public Demand for Night Service

The American Medical Association is calling upon county medical societies to meet the public demand for emergency medical service at night.

"From many sections of the United States," says an editorial in a recent (March 6) issue of *The Journal of The American Medical Association*, "complaints have come lately that persons who have called physicians late at night have been unable to secure attendance from either those whom they considered their family physicians or from specialists or, indeed, from any physician."

The American Medical Association says that large county medical societies or urban groups should maintain a physicians' telephone exchange which would take the responsibility for locating physicians if response is not made to the ringing of the telephone in the home or in the office.

The solution is simple and practical, requiring only a minimum of community organization. A number of county medical societies already maintain a physicians' telephone exchange where doctors' calls may be received and doctors located if their office or home telephones do not respond. Such an exchange can be utilized as at night or on holidays, simply by furnishing the exchange with a list of physicians who are able and willing to make night calls. Such physicians would probably include the younger general practitioners, newcomers to the community, and others in general practice. If such a roster were available, and its availability widely publicized, night calls for medical service would soon gravitate to this center and the patient would be assured the services of a physician.

Under such a system the necessity for calling many doctors would be eliminated. Two calls at most would be necessary. Where there is no physicians' telephone service, it might be possible to have the hospitals cooperate by handling such night calls.

The Medical Society of the District of Columbia and the Milwaukee County Medical Society have found such a plan practical, as have a number of other societies.

By this simple and practical expedient, which is doubtless in effect in modified form in a number of communities, the sick can be served and the medical profession can redeem its pledge of unselfish public service.

It is highly important that where such arrangements exist they be brought to the attention of the lay people in the community through appropriate public channels, not once but repeatedly, to keep the shifting populations well informed.

Few problems in the field of medical service have aroused so much public discussion. Whether resentment against physicians is justified or not, it does harm. The solution for this problem is so eminently simple and would reflect so favorably upon physician-patient relationships that medical societies everywhere are urged to give it serious consideration immediately.

Cancer Society Campaign

With the California Division of the American Cancer Society and its many county branches currently conducting their annual educational and fund raising campaign, information as to the functions of the county branches and the county medical societies in the cancer control program is in order.

The county branches of the American Cancer Society list as their principal functions:

1. To assist the medical profession in cancer control;
2. To encourage the diagnosis of cancer in the early curable stage;
3. To provide services for needy cancer patients.

Because cancer control is a medical problem, projects of the American Cancer Society in any county must be advised upon and approved by the County Medical Society. The County Medical Society has the leading and important role in these joint cancer control programs.

Because the whole program of the county branch of the American Cancer Society is geared to assisting the physicians and the County Medical Society in cancer control, the effectiveness of this assistance, in turn, depends upon the cooperation of members of the County Medical Society.

The American Cancer Society maintains a continuing program of lay education which includes distribution of literature, magazine and newspaper publicity, and radio programs. It persistently stresses that all families in a community should know the danger signals of early cancer and go to their physician when such symptoms arise.

In order to make this lay education as personal and effective as possible, the county branch of the American Cancer Society maintains an Information Center where patients that do not have a physician may go for advice and whence they will be referred to a physician from the list of the County Medical Society.

Another function of the American Cancer Society, on a national, state and county level, is assistance

with the education of physicians in the diagnosis and treatment of early cancer.

On the county level, the county branches of the American Cancer Society give assistance to Tumor Boards in hospitals approved by the American College of Surgeons. The county branches furnish what financial assistance is necessary to make the Tumor Boards effective centers of consultation for all doctors and their cancer patients in the community and to increase their effectiveness as teaching centers for the medical profession.

The county branches of the American Cancer Society also are in a position to help physicians in services to needy cancer patients, particularly through a hospitalization program provided for early, medically indigent patients who are not entitled to care in the county hospital.

Members of the County Medical Societies can cooperate in the county programs of the American Cancer Society in various ways. They can help materially in the cancer control program by making themselves available for *talks on cancer to lay groups.*

Members can accept as private patients persons who wish a periodic physical examination for cancer and other chronic diseases when these cases are referred under the direction of the County Medical Society.

Through cooperation in the use of services provided by the American Cancer Society and help in developing and carrying out an effective program of lay education, appreciable new gains will be made in the joint program of cancer control.

Postgraduate Courses

The Committee on Postgraduate Activities, California Medical Association, has been requested to publish a list of available postgraduate courses of particular interest to physicians in general practice. Following is a list of courses to be given during the spring and summer months at the various medical schools as indicated.

COLLEGE OF MEDICAL EVANGELISTS

Division of Postgraduate Medicine

Applications for admission may be directed to Dean of Graduate School of Medicine, Harold M. Walton, M.D., 312 North Boyle Avenue, Los Angeles 33, California.

Endocrinology—(8 periods)—Dr. Julius Bauer. Mondays: 8:00-9:30 p.m. Course begins April 5, 1948. Tuition: $30.00.

Nutrition—(20 hours)—Michael J. Walsh, M.Sc. Wednesdays: 2:00-5:00 p.m.; 7:00 to 9:00 p.m. Course begins April 7, 1948: Tuition: $25.00.

Wives of doctors may audit course for $10.00.

General Surgery, Miscellaneous:

1. Surgical Staff Conferences—(32 periods)—Mondays: 8:00-10:00 a.m. Los Angeles General Hospital—general surgical staff at Los Angeles County General Hospital.

2. Neoplastic and Allied Diseases—(32 periods)—Thursdays: 10:00-11:30 a.m. Evans Hall, White Memorial Hospital. Regular meeting of White Memorial Hospital tumor board.

3. Urological Staff Conferences—(32 periods)—Mondays: 10:00-12:00 a.m. Los Angeles General Hospital. General consultation period of Urological Staff at Los Angeles County General Hospital.

UNIVERSITY OF SOUTHERN CALIFORNIA

Graduate Division of the School of Medicine

Communications should be directed to: George C. Griffith, M.D., Director, Graduate Division of the School of Medicine, P.O. Box 158, 1200 North State Street, Los Angeles 33, California.

April 6—Allergy (six weeks, Wednesday evening, weekly). Course No. 737.

April 7—Pulmonary Diseases (twelve weeks, Wednesday evening, weekly). Course No. 740.

April—Recent Advances in Internal Medicine (twelve weeks, one evening weekly). Course No. 745.

May—Recent Surgical Advances (twelve weeks, Wednesday evening, weekly). Course No. 756.

May—Principles of Physical Medicine (twelve weeks, full time). Course No. 775.

July—Physical Medicine in the Treatment of Anterior Poliomyelitis (four weeks, full time). Course No. 776.

August—Electrodiagnosis and Electromyography (four weeks, full time). Course No. 778.

Exact dates where no day of the month is stated can be had by addressing the Director of the Graduate Division.

UNIVERSITY OF CALIFORNIA MEDICAL SCHOOL

Direct communications to: Stacy R. Mettier, M.D., Head of Postgraduate Instruction, Medical Extension, University of California Medical Center, San Francisco 22, California.

June 21 through 25

Internal Medicine and General Surgery. Prepared especially for the general practitioner.

June 21 through July 2

Cytological Diagnosis of Cancer by the Smear Technique. This course is under the direction of Herbert F. Trout, M.D., Professor of Obstetrics and Gynecology. It will consist of daily lectures, laboratory and lecture demonstrations and laboratory practice in interpretation of smears. Emphasis will be placed upon vaginal smears for gynecological malignancies. Urological, gastric, and pulmonary techniques will also be covered. Complete information is available through the University Extension Division.

Course limited to 70 students. Physicians are required to furnish own microscopes.

June 28 through July 2

Pediatrics. This is a course in general pediatrics designed for those practicing chiefly or entirely with children. It will consist of lectures, clinical demonstrations and illustrative material.

UNIVERSITY OF CALIFORNIA MEDICAL SCHOOL CALIFORNIA

405 Hilgard Avenue, Los Angeles 24, California

April 19 through 23

Postgraduate instruction in neuropsychiatry.

Fee $50 payable at the time of application.

Place: Auditorium D-14, Birmingham Veterans Administration Hospital, Van Nuys, Calif.

The Course: Open only to graduates of approved medical schools. The fundamentals of neurological examination and diagnosis will be presented. Psychodynamics, vascular and degenerative diseases of the central nervous system, psychoses pharmacology of the autonomic system, epilepsy, character disorders, alcoholism, C.N.S. tumors, C.N.S. syphilis, psychoneurosis and psychosomatic medicine will be presented by an excellent faculty.

STANFORD UNIVERSITY SCHOOL OF MEDICINE

The annual fall refresher courses will be held early in September. A complete announcement of courses will be published in a later issue.

BOOK REVIEWS

BLOOD DERIVATIVES AND SUBSTITUTES. By Charles Stanley White, M.D., Sc.D. Former professor of surgery, George Washington University School of Medicine and Jacob Joseph Weinstein, B.S., M.D. Associate in Surgery, School of Medicine, George Washington University. The Williams and Wilkins Co. Price $7.50.

The authors have written an encyclopedic volume in which they review the recent contributions to the subject of transfusions of blood derivatives and substitutes, the techniques of handling blood, and the organization of blood repositories. The volume is packed with useful information of value to technicians, corpsmen, medical students, directors of blood banks, and medical house officers. It is of less value to the general practitioner because the authors have not summarized the important practical considerations of each section in an adequate manner. This they might have done without impairing their scholarly contribution; also they could have crystallized their opinions on the basis of their broad experiences. The chapters dealing with the three major blood proteins and the procurement, preparations, and storage of plasma are very good, as is also the chapter on plasma fractions, and the chemical, physical, physiological, and immunological principles and their therapeutic indications.

It is clear from the discussion offered in Chapter IX that there are no substitutes short of plasma itself which can be called "plasma substitutes." The authors list a group of "emergency substances," but most of them violate the principles that "plasma substitutes" must not he antigenic and that they must be entirely innocuous. The authors are ardent advocates of the universal type O donor, and the thesis of type specificity of human blood plasma and serum for transfusions (in the opinion of the reviewer) is not advanced with enough force. The data they present in favor of universal type O blood are quoted from Army and Navy statistics, which deal with a young, vigorous and healthy population, and obviously cannot be compared with the often devitalized civilian population with which the average physician has to deal.

The authors wind up the academic discussion of their book with an exhaustive, yet terse and much condensed chapter on shock, in which they outline the major theoretical considerations in the treatment of this syndrome. For the first time all the important information having to deal with the subject of blood derivatives and plasma is collected in one volume. It should prove a source of stimulation for new departures in this field.

* * *

PSYCHOPATHOLOGY AND EDUCATION OF THE BRAIN-INJURED CHILD. By Alfred A. Strauss, Psycho-Educational Consultant, Evanston, Illinois, President, Cove Schools for Brain-Injured Children, Racine, Wisconsin; and Laura E. Lehtinen, Psycho-Educational Consultant, Evanston, Illinois; Educational Consultant, Evanston, Illinois; Education Director, Cove Schools for Brain-Injured Children, Racine, Wisconsin. Grune & Stratton, New York. 1947.

This book deals particularly with that child whose brain potentially or originally was normal and then suffered injury prenatally, at birth or in the early postnatal period. It clarifies the picture for those of us who, working with children, find it difficult to explain or differentiate pathologies in the psychosomatic field, the overlapping symptoms found in subnormal children, psychopathies of childhood, physically handicapped children with emotional disturbances, etc.

The book is divided into Part I dealing with psychopathology and Part II with education. In the first division are sections on anatomy, perceptual disturbances, thinking disorders, testing and diagnosing. The second division is devoted to techniques of educating the brain-injured child in reading, arithmetic and writing. A final chapter is devoted to the brain-injured deaf child.

* * *

EAR, NOSE AND THROAT. Symptoms—Diagnosis—Treatment. By George D. Wolf, M.D. Assistant Clinical Professor of Otolaryngology, New York Medical College, New York. J. B. Lippincott Company, Philadelphia. October, 1947. Price, $10.00.

Diagnostic and therapeutic concepts in the specialty of otorhinolaryngology have undergone a remarkable about-face in the past 15 years. New editions of the older texts have made attempts to keep abreast of the newer knowledge, but these efforts have too frequently proven inadequate because the authors (or editors) have been too reluctant to delete those portions containing antiquated or even discredited ideas.

In creating a new text, the author has made a creditable attempt to present the subject in a manner which appeals to the analytic and reasoning faculties of the student rather than one which relies on mere memorization of rules. The text can be recommended for use by the student or general practitioner inasmuch as it provides a maximum of information with a minimum of misinformation.

* * *

PHARMACOLOGY AND EXPERIMENTAL THERAPEUTICS. By Hamilton H. Anderson, Fumiko Murayama and Benedict E. Abreu. University of California Press, Berkeley and Los Angeles. Price, $6.50.

This is not a textbook, but rather a collection of brief abstracts of articles in the field of pharmacology and experimental therapeutics, including toxicology, published during the years 1941 to 1946. The book is designed to help bring the reader up to date on work done during the war, when periodical literature was frequently not available to military personnel, or when absorption in war research prevented keeping up on general developments. The book accomplishes its purpose to the extent of orienting the reader. Many important contributions are overlooked however. For example, no mention is made of the use of para-aminobenzoate in the treatment of typhus and Rocky Mountain spotted fever, the information on the new sulfonamides is grossly incomplete, there is a good discussion of thiouracil but propyl thiouracil is not mentioned, benadryl but not pyribenzamine is reviewed, and only an insignificant clinical paper on vitamin P is mentioned whereas many careful experimental papers on vitamin P, and especially on rutin, have appeared in English language periodicals. On the other hand much work on new drugs and poisons is well covered—for example, alloxan, cellulose actetate phthalate (for enteric coating), new antimalarials, curare, DDT and folic acid. Much new work on alcohol, aliphatic amines, amphetamine, digitalis and its glycosides, heparin, and methyl bromide, to mention a few old remedies and poisons, is described briefly. A large number of compounds of little practical interest, but considerable academic importance, are at least mentioned.

The book is especially valuable because dose is related to effect, not only in man, but also in a large variety of experimental animals. For this reason it is useful to both the clinical investigator and the experimental pharmacologist. The book is useful to the teacher in establishing doses for student experiments.

DERMATOLOGY IN GENERAL PRACTICE. By Sigmund S. Greenbaum, M.D., F.A.C.P., Professor of Clinical Dermatology and Syphilology, University of Pennsylvania Graduate School of Medicine, with the collaboration of Lester W. Burket, M.D., D.D.S., S. Gordon Castigliano, B.S., M.D., F.A.C.S., William T. Johnson, M.D., Samuel Lisker, M.D., John B. Ludy, B.A., M.D., Theodore Melnick, M.D. and Herbert W. Wade, M.D. Cloth. Price $12. Pages 889 with 846 illustrations, 20 in color. F. A. Davis Co., Philadelphia, 1947.

This is a new text written especially "for the busy practitioner, the undergraduate, and for all those who from time to time may require information on the major clinical, diagnostic, and therapeutic facts about a particular dermatosis."

The subject matter is presented in clear, well-spaced type with two columns to a page. The diseases are discussed in alphabetical order with no attempt to group them according to etiology, types of lesions, etc. The illustrations are of good quality but there are practically no photomicrographs of histopathological sections or parasites except in the chapter on cancer.

The subject of Dermatology and Syphilology is covered in a fairly comprehensive manner. The chapter on cancer covers 98 pages and is written by an oncologist rather than a dermatologist. Without desiring to criticize the thoroughness with which such an important subject is treated, nevertheless most dermatologists would be struck by the fact that many of the conditions presented represent serious and far advanced types of cases which dermatologists are not called upon to treat. Many dermatologists as well as others qualified to express an opinion might take exception to the statement that "today it is generally conceded that radiation is usually the primary treatment of choice for lesions about the head and neck," feeling that perhaps electrosurgical procedures such as the high frequency cutting current might be a safer method for the destruction of squamous cell epitheliomas of the lip, neck, face, etc.

Incidentally epithelioma is not listed in the index. The subject is indexed under cancer. There are several other omissions in the index, such as pityriasis alba, lichen urticatus, aphthous, stomatitis, etc. One would expect such a common condition as canker sore to appear in the index either as such or as one of its synonyms. Although not indexed, it is discussed under herpes simplex even though its identity with this condition is still a matter of debate.

In discussing insect bites, the statement is made that "Trombicula irritans (pulex penetrans) is the chigger found in America." The present accepted term for the American "chigger" is Leptus rileyi, formerly known as leptus irritans, trombidium or trombicula irritans, etc., which is the six-legged larva of an eight-legged red mite. This has nothing whatever to do with Pulex penetrans (now known as tunga penetrans) which is a tropical flea and has also been designated as chigoe and jigger.

California physicians will probably take exception to indexing coccidiomycosis under "California disease." They will also note that the disease is discussed under the heading of coccidiodal granuloma and that no mention is made of the fact that the disease usually begins as an acute respiratory infection, is often followed by erythema nodosum-like lesions on the legs and that in only a comparatively few cases do the granulomatous lesions develop. Without mentioning these facts and merely stating that "coccidiodal granuloma . . . is endemic in Southern California" and later that "This disease is, however, usually fatal," gives an impression quite contrary to the facts. This reviewer in a period of 28 years of practice limited to Dermatology and Syphilology has seen only one private patient with coccidiodal granuloma.

The section on fungus infections would have been more useful if the author had described the very simple method of preparing extemporaneous slides of skin scrapings in KOH and illustrated by photomicrographs the difference between fungi and artefacts. There is no subject in Dermatology more abused than the incorrect labelling of various and sundry conditions as fungus infections without adequate evidence.

Finally, acne vulgaris does not appear in the index. The subject is adequately discussed, however. I am sure that many dermatologists would not agree that the recommended course of eight weekly doses of 75 R units of x-ray was adequate and that "the result of several courses [as recommended] would result in excessive dryness, atrophy and telangiectasis." The recommendation of covering the scalp hair and ears in treating acne by fractional doses of Roentgen therapy seems unnecessary and cumbersome.

The utmost caution should be observed in the use of Roentgen therapy and the best advice would be for the general practitioner not to employ it unless he has had special training in a dermatological center. From the therapeutic point of view many dermatologists would feel that eight treatments of 75 Roentgens each would be a waste of their time and their patients' money inasmuch as five to seven treatments more would be safe and less than that might fail to accomplish the objective. From a medico-legal standpoint it is somewhat dangerous to state that two or three such courses totalling 16 to 24 doses would lead to atrophy and telangiectasia. This is certainly contrary to the general experience. Obviously, one could not give an indefinite number of treatments and practically all dermatologists would agree that a total of 30 doses of 75 Roentgens each given in two or three courses of 10 to 15 doses each and separated by intervals of 6 to 12 months would be a safe maximum.

In spite of the above criticisms this book will doubtless find a place in the library of many physicians because of its comprehensive coverage of the subject and its alphabetical arrangement of diseases, which makes for easy reference.

* * *

GIFFORD'S TEXTBOOK OF OPHTHALMOLOGY. By Frances H. Adler. Revised Fourth Edition. W. B. Saunders Company, Philadelphia, 1947.

Dr. Adler is to be thanked for his splendid contribution to our medical literature by the continuing of Dr. Gifford's work.

The book is a revised edition of Dr. Sanford Gifford's textbook which was well received in the past.

The book primarily was designed for medical students and general practitioners, but much of the material will be of benefit to the ophthalmologist.

The book is very well organized as to subject matter, and the illustrations in both color and black and white are excellent. An ophthalmologist wishing to be an instructor could derive great benefit from the organization of the subject matter in this book.

There are five chapters in the book namely, four, five, seventeen, nineteen, and twenty which should be read not only by general practitioners but by anyone interested in ophthalmology.

* * *

400 YEARS OF A DOCTOR'S LIFE. By George Rosen, M.D., and Beate Caspari Rosen, M.D. Henry Schuman. Price $5.00.

This interesting olla podrida of medical lives consists of a series of abstracts from the biographies, letters and writings of some 80 physicians, ranging from Theophrastus von Hohenheim to Gordon Seagrave. The authors have chosen passages which they regard as most revealing of the basic character and qualities of the man or woman in question . . . largely autobiographical in origin.

The anthology is arranged in ten sections, ranging from "Early Years," through "Medical Student," "Teaching" and "Political Days" to "Reflection on Life and Death." Many

of the best abstracts are already well known to students, e.g. those of Paré, Sims, Osler, Zinsser, etc. Some reflect the repetitiousness of human experience. For example, from Jean Chaptal:

"One day Fressines came to tell me that a cadaver had just been delivered to his particular amphitheater. We went there immediately; I found the body of a young man who had died four or five hours earlier of an inflammation of the lungs. I recognized this young man as having helped me pick up the balls when I was playing pall-mall, and this circumstance made me feel ill at ease. Nevertheless, I set about dissecting him, but at the first stroke of the scalpel on the cartilages that connect the ribs with the sternum, the cadaver placed the right hand on the heart, and the head moved feebly. The scalpel fell from my hands and I fled in fright. From this moment on, I abandoned the study of anatomy."

Some of the most appealing lines are those of Albert Schweitzer in which he explains why he decided to become a medical missionary, how he happened to choose Equatorial Africa as a milieu, and the source of his initial support. A Christian physician.

The authors are medical graduates of the University of Berlin, and have edited "Ciba Symposia," the "Journal of the History of Medicine and Allied Sciences" amongst other interests. The book runs slightly over 400 pages, is neatly finished and can be recommended to all who have a bedside table and a lamp.

* * *

CALCIFIC DISEASE OF THE AORTIC VALVE. By Howard T. Karsner, M.D., and Simon Koletsky, M.D. J. B. Lippincott Co., Philadelphia.

This monograph represents the most complete and up-to-date discussion of the subject available in the literature. The authors present convincing evidence of the rheumatic etiology of calcific disease of the aortic valve. The etiology of this condition has been the subject of controversial opinions in the past and the study presented in the monograph has been greatly needed. Karsner and Koletsky analyze 200 autopsied cases of calcific aortic valve disease with a critical discussion of the clinical features, pathologic anatomy and emphasis on the gross and microscopic stigmata of rheumatic cardiac disease. The authors conclude that definite evidence of rheumatic disease was found in 196 of the 200 cases; in one the evidence was entirely negative while in three the evidence was suspicious.

The scholarly approach to the subject, the well-known authoritarian character of the authors, the statistical data and the excellent pathologic discussion all combine to make this book most valuable. It can be highly recommended to all interested in the subject, and should prove of especial interest to pathologists and cardiologists.

* * *

SYMPTOMS AND SIGNS IN CLINICAL MEDICINE. By E. Noble Chamberlain. Fourth Edition. The Williams & Wilkins Company, 1947. Price $8.00.

This book is written by an English author primarily for the student who is beginning his work in clinical medicine. As such it inevitably must be compared with American textbooks on physical diagnosis. It goes beyond the usual text on physical diagnosis in that the author has classified symptoms and signs into the various systems of the body and has attempted the further step of discussion of these signs and symptoms as part of some of the commoner or more important pathological diagnoses. He also mentions briefly certain special laboratory or instrumental investigations which may be used to confirm the impression gained by the examiner. In addition, there are short chapters devoted to medical operations and instrumental investigations, radiology and clinical pathology.

In the reviewer's opinion this book compares very favorably with the various standard American texts. In general, it is clearly and concisely written. The paper and printing are good. The black and white illustrations, of which there are a great many, are fairly good; the color photographs are poor; the diagrams are excellent. It is not as complete as some American texts but it has the merit of brevity. And the presentation of signs and symptoms in relation to disease complexes is one which will make the student learn faster.

Too much space, proportionally, has been given to the nervous systems—110 pages, or almost one-third of the total number, exclusive of the special chapters. The cardiovascular system gets only 46 pages and the respiratory system 41. In contrast, the thirteenth edition of Cabot and Adams' Physical Diagnosis, a book of 833 pages, allots the nervous system only 67 pages whereas the cardiovascular system gets 171 and the respiratory system 123 pages.

The author's recommendations with regard to special investigation and the chapters on investigations and on clinical pathology require revision to be of practical use to American students. Such instruments as Dudgeon's sphymograph and Mackenzie's polygraph belong to the history of medicine and to any cardiologist who may wish to use them but do not deserve description in a beginner's text. Nor is there practical need for one and a half pages devoted to the estimation of urea in the urine by Little's Nitrometer. Especially when electrocardiography must be contracted into four and one-half pages.

A few passages which the reviewer considers bad may be mentioned. On page 47, after correctly stating that Koplik's spots are located on the buccal mucous membrane the author exhibits a colored plate (borrowed from French's index of diagnosis) which show them on the lower lip! The description of angina pectoris and its differentiation from coronary thrombosis are done in a vague and confusing manner, reminiscent of the knowledge of 35 years ago (pp. 97-98). On page 101 the edema of hypothyroidism and of lymphatic blockage is wrongly ruled not edema but "more solid swelling!" On page 105 the student is advised "if the index finger of each hand is placed on the radial pulse and an attempt is made to obliterate this with the upper finger, the disappearance of the pulse can be noted by the lower finger . . . in cases where instrumental estimation seems unnecessary." The discussion on heart murmurs and their causes is confusing as is such a remark as "allergy also causes a large flabby tongue" (p. 159).

* * *

ATLAS OF BACTERIOLOGY. By R. Cranston Low, M.D., F.R.C.P.E., Bacteriology Department University of Edinburgh, and T. C. Dodds, F.I.M.L.T., Laboratory Supervisor to the Department of Pathology, University of Edinburgh. 168 Illustrations of which 167 are in color. The Williams and Wilkins Company, 1947. Price $8.50.

This manual consists of colored illustrations portraying the colonial appearance of bacteria on culture media and in stained smears. Direct color photomicrography has been utilized wherever possible but technical difficulties required the preparation of water color drawing in most instances.

The book is obviously a labor of love on the part of the authors and has been beautifully and meticulously prepared and printed. In spite of this fact, it is impossible to recommend it for the purpose for which it was intended: the instruction of the undergraduate in bacteriology. The most satisfactory drawings of bacteria bear little relationship to their actual appearance and cannot be substituted for experience with stained smears and the microscope.

The book was shown by the reviewer to a number of medical students and technicians who had recently completed courses in elementary bacteriology. All agreed that it would have been of no value whatever to them.

SYNOPSIS OF NEUROPSYCHIATRY. By Lowell S. Selling. Second Edition. C. V. Mosby Co., St. Louis, Mo., 1947. 561 pages.

The second edition of this book has been enlarged and now includes a chapter on psychosomatic medicine and psychiatric therapy. Other chapters have been revised, and paragraphs dealing with military aspects of the subject have been deleted. The work is still merely a guide for students and practitioners and should not be considered as a textbook. It could serve as a useful outline for students who wish to review the subject, if supplemented by more complete volumes.

* * *

BIOCHEMISTRY FOR MEDICAL STUDENTS. By William Veale Thorpe, M.A. (Cantab.). Reader in Chemical Physiology, University of Birmingham. Fourth Edition. The Williams & Wilkins Company. Price, $5.00.

This brief survey of biochemistry would serve as an excellent digest of present knowledge of the subject for the practicing physician, as well as the medical student. The point of view of the author in fitting quantitatively chemical mechanisms "against the background of the *normal intact animal*" before they are accepted as correct, is certainly commendable. Truly, as the author states, "The connection between Biochemistry and Human Physiology is such an intimate one that the two subjects must be studied side by side." By presentation of his subject in a dynamic manner, the author has given life to the chemical processes occurring in living tissues.

* * *

PHYSICAL MEDICINE IN GENERAL PRACTICE. By William Bierman, M.D., with a chapter on Medical Rehabilitation by Dr. Sidney Licht. Second Edition. Paul B. Hoeber, Inc. Price $8.00.

The material in this book is a revision of that of a previous volume with the addition of new information accumulated since the original publication. It contains an adequate discussion of the agents used in physical medicine and the descriptions are clarified by many well chosen excellently done illustrations.

There is a section on occupational therapy and another on medical rehabilitation which makes use of ideas developed during the last war by the military medical services.

The latter part of the book describes physical procedures used in the treatment of diseases of the different systems of the body and this section is also very well illustrated.

The appendix contains the specifications for physical therapy equipment established by the Department of Hospitals of the City of New York and should be of aid to those wishing advice on how to purchase physical therapy equipment.

This book should be of value to those using physical medicine procedures in the treatment of patients.

* * *

METHODS OF DIAGNOSIS. By Logan Clendening, M.D., F.A.C.P. and Edward H. Hashinger, M.D., F.A.C.P. The C. V. Mosby Company.

This book is written in the easy style characteristic of the senior author and has many interesting features, not the least of which is the use of historical example to emphasize his points. It is a highly personalized book and quite dogmatic—features that will cause considerable controversy. The authors dismiss with a sentence diagnostic features that most experienced observers feel are of significance. For example (pp. 303) "distention of the veins of the neck never meant anything definite to me as far as the heart is concerned." Cardiologists who emphasize the importance of increased venous pressure can hardly agree with this statement. Equally difficult to accept are statements on diagnosis such as the following: "The facies of the patient with anginal failure is equally striking. It has never been formally described in the literature but every clinician is familiar with it, even if subconsciously . . . It really shows best in the back of the neck. . . . A curious indefinite pallor, not cachexia, but resembling cachexia as the mist resembles rain, an emaciation of the insertion of the sternomastoid, and the trapezius as if the excess fat and only the excess fat had been dissolved away from around the skin overlying the tendons." Again (pp. 317) "thrills are nice tags but not very important in diagnosis. They are for connoisseurs." Another statement (p. 318), "I do not believe there is anything to be gained from percussion of the heart." On page 405, the authors state: "I do not know what influenza is. I know what they say it is, but that is not the same thing."

The author's habit of telling a story to describe a condition often is emphasized to the exclusion of a definite description of the disease state under discussion. For example, when discussing massive postoperative collapse of the lung (pp. 428), no diagnostic data at all are given. The details of diagnostic procedure are scanty in many sections of the book.

Another criticism that seems appropriate is the absence of many modern references. Although the book was published in 1947, references later than 1942-43 are rare. In the discussion of atelectasis mentioned above, the most recent reference quoted was 1924.

The book contains much data and many interesting references; nevertheless, it cannot be recommended as a modern accurate discussion of the current thinking on methods of diagnosis.

* * *

RADIUM DOSAGE. The Manchester System. Edited by W. J. Meredith, M.S.C., Christie Hospital and Holt Radium Institute, Manchester. Williams and Wilkins Company, Baltimore. Price, $4.50.

Radium therapy has become one of the accepted procedures for dealing with many types of neoplasms but to persons who are not trained in the use of radium, the discussion of various steps needed to arrive at correct dosage is enlightening. In clinical therapeutics, dosages are based on the weight of the drug per unit of body weight, but in radium therapy dosage is dependent upon the amount of radium with the correct distribution and time factors in relation to the volume of tissue to be destroyed.

While this book is not written for the general practitioner, the section on the clinical aspects of radium dosage may be read by him with interest and profit so as to familiarize himself with the problem of dosage methods. It really is a collection of articles appearing in the British Journal of Radiology written by prominent British clinicians and physicists from the Holt Radium Institute. It is an exposition of the experimental work and its clinical applications carried out over the last 15 years. Radiologic literature contains innumerable papers, largely emanating from the Memorial Hospital in New York, Radiumhemmet in Stockholm and the Curie Institute in Paris covering the same field, but they are scattered in technical journals, many in foreign languages, throughout the world. Here one gets everything in one small book, which for simplicity and clarity of presentation is unsurpassed, although a fundamental grounding in higher mathematics is necessary to understand the physical aspects. The illustrations and tables are easily interpreted, thus simplifying dosage calculations. The aim, of course, is to get a homogeneous radiation, adequate in amount capable of destroying neoplastic tissues, while at the same time conserving normal structures. I believe that the authors have extended our knowledge on the accuracy of dosage but its clinical application and success must rest on the clinical experience of the physician himself in applying its principles to the individual patient.

In my opinion this book should be on the desk of every radiotherapist as a dependable reference. For students and residents in therapeutic radiology, who are beginning their life work, it should be on the list of required reading. In other words, it should be a "must" book.

* * *

ILLUSTRATIONS OF REGIONAL ANATOMY. By E. B. Jamieson. Seventh Edition. The Williams and Wilkins Co., Baltimore, Maryland, 1947. 320 pages. Price, $20.

This set of anatomical illustrations comprises seven sections, each devoted to a region of the body. The volumes are of a handy size for use in the dissection room. The plates are on loose-leaf pillars so that the student has the choice of removing pages for inclusion in notebooks, of keeping them in the original covers, or of regrouping them to suit a desired plan of study. The illustrations are multicolored, for contrast, making it a simple matter to study the composite anatomy of a given region. A number of minor improvements have been made in this, the seventh edition. The set ranks among the best of current diagrammatic illustrations of anatomy, and should be included in the library of anyone teaching the subject.

* * *

A REVIEW OF "DISEASES OF THE NOSE, THROAT AND EAR." By William Lincoln Ballenger, M.D., Howard Charles Ballenger, M.D., Assisted by John Jacob Ballenger, M.D. Lea & Febiger, Philadelphia.

The advertisement and prospectus that was sent out regarding the Ninth Edition carries the usual assurance of complete revision and great improvement. In general this is true. There is some question in regard to the statement that the physician "can turn to it with confidence that he will find adequate and correct information on every medical and surgical problem that may arise."

In reviewing the book certain things stand out in one's mind. An increased amount of space has been given to rhinoplastic reconstruction. It is now presented in a manner that demands either abridgment or further elaboration to be of any real value.

In regard to criticism of complete revision, one might mention the lack of consistency in using the newer terminology for the bacteria and other etiologic agents of disease. The book contains several poor illustrations that have been carried over from previous editions. This is particularly true in regard to the illustrations of the Lynah intubation speculum (Figure No. 255). No mention is made of the more modern self illuminated laryngoscopes wherein the handle acts as a container for the batteries.

It is pleasing to see that in the successive editions the indications for turbinectomy are becoming less and less evident and that the amount of space devoted to the technical phases of the procedure is markedly diminished. It is hoped that the future editions may even eliminate the subject. The portion of Chapter LIII dealing with surgery of brain abscess should be brought up to date or eliminated.

A number of the procedures and techniques as outlined do not necessarily agree with the present practices employed by a large per cent of active Otorhinolaryngologists or with the teachings as offered at present by the accredited schools in Otorhinolaryngology. Specifically, the use of cocaine flakes is not nearly as widespread as one would assume from this text. Likewise, the use of cotton pledgets soaked in 10 per cent cocaine that are to be left in the nose for the production of anesthesia is becoming less in favor.

The chapter on the general and local treatment of sinus infections is more or less standard and routine. It is interesting to note that the subject of tonsillectomy under general anesthesia is almost entirely devoted to the use of the Ballenger-Sluder tonsillectome. Very little space is devoted to the dissection and snare method. The chapters devoted to diseases and surgery of the ear are acceptable. The final section on bronchoscopy, direct laryngoscopy, esophagoscopy and gastroscopy is uninteresting. It is an abridgment of the works of the contributors that is not particularly illuminating to the uninitiated and of no value to those who have pursued work in those fields.

There is opportunity for some criticism in regard to the binding. The volume sent for review shows evident signs of wear after the short period of time it took to go through the book page by page. "Diseases of the Nose, Throat and Ear" by Ballenger has been and should look forward to being a standard text in Otorhinolaryngology. With this thought in mind the necessity that the physical constituents of the volume be of sufficient caliber to stand up under the stress and strain of daily use should be evident.

* * *

AN INTRODUCTION TO BIOCHEMISTRY. By William Robert Fearon, Third Edition. Grune and Stratton, New York. 1947. Price, $6.00.

The author of this textbook is professor of biochemistry at the University of Dublin. It is well written, and most of the topics discussed have been brought up to date. The style of the text matter is not lively, but the author has enlivened his book by frequent use of quotations from poets and other men of letters. The point of view is distinctly that of a chemist rather than of the chemical physiologist; the known chemical reactions in the body, such as intermediate carbohydrate metabolism, are only superficially discussed whereas 32 pages are devoted to the chemistry of identification and structure of carbohydrates. The book is of more value to the graduate student and worker in biochemistry than to the first year medical student or practicing physician.

* * *

THE THEMATIC APPRECEPTION TEST. By Silvan S. Tomkins, Ph.D. Research Associate, College Entrance Examination Board. The Grune & Stratton Company. Price, $5.00.

This is a study of the clinical application of a psychological test in which the subject is required to relate a story suggested by each of a number of pictures presented to him. Although an objective method of scoring the test has been sought for, it was the impression of the reviewer that the goal was not yet at hand. The interpretations given of the subjects' stories were obviously colored by psychoanalytic concepts, so much so as often to tax one's credulity. Again, the wisdom of such ventures by the psychologist into clinical psychiatry may be questioned. The book is of some interest to the psychiatrist, of greater interest to the psychologist, and probably of no interest at all to the physician.

* * *

BRIEF PSYCHOTHERAPY. A Handbook for Physicians on the Clinical Aspects of Neuroses by Bertrand S. Frohman, M.D., with the collaboration of Evelyn P. Frohman. Lea and Febiger, Philadelphia, 1948. Price $4.00.

This book is aimed at the non-psychiatric practitioner of medicine, whether he be surgeon or internist. It presents in simple terms that all may understand a clear delineation of the more common mental mechanisms, as well as methods of treatment of the illnesses they produce.

The author, although trained in psychoanalysis, has broken away from the orthodox dogma which in his opinion has greatly curtailed the usefulness of this psychological school. He gives orthodox analysis, with its months and years of tedious exploration of the unconscious, full credit as an instrument of research. However, he feels that enough has been learned so that the principles of human behavior so discovered may be put to use in a much more brief and

expeditious therapeutic approach, with consequent extension of their benefits to a much greater number of patients.

No doubt for this attitude he risks excommunication by the old-line analysts, a punishment that one may assume is not too severe. Equally, the superficiality of his treatment of some of his case histories will displease many psychiatrists. However, in a presentation of this kind over-simplification is entirely justifiable; without it certainly the point to be made would not be put over with any degree of success.

Throughout the book there is, to this reviewer's thinking, a bit too much and too obvious "sugar coating" to make the message palatable to the physician; possibly the lack of subtlety will be least objectionable where the message is most needed. On the other hand, an occasional "interpretation" seems rather far-fetched even to one of psychiatric training, and might have been omitted without loss to the book.

In all, this is a book which should be read by every practitioner of medicine, certainly by every medical student, and would even do no harm should it fall into the hands of an occasional patient.

* * *

HANDBOOK OF DIAGNOSIS AND TREATMENT OF VENEREAL DISEASE. By A. E. W. McLachlan. Third Edition. Williams & Wilkins Co., Baltimore, 1947.

This handbook is compiled from the author's lectures to undergraduate and postgraduate students at the University of Bristol and is published as a guide to the general practitioner in the recognition and treatment of venereal disease. The first edition appeared in 1944 and has had two revisions, largely because of the changes in therapy that have resulted from the introduction of penicillin.

Slightly more than half of the 362-page book is devoted to syphilis. The clinical descriptions are brief and there is evident the usual overemphasis on the trivial phases of the infection that is common in textbooks on dermatology. The really important aspects of the disease are brushed over very casually. For example, the clinical description of the primary and secondary stages consumes 60 pages, nearly one-third of the space devoted to the disease as a whole, whereas neurosyphilis, including its treatment, is condensed to 24 pages and cardiovascular syphilis to ten.

The section on the treatment of early syphilis includes a discussion of antisyphilitic drugs, the reactions they produce and the treatment of these reactions. No mention, however, is made of BAL which has revolutionized the treatment of arsenical reactions within the last few years.

In the treatment of early syphilis, prolonged, intermittent therapy with trivalent arsenic and bismuth is evidently preferred, with more intensive schemes and penicillin thrown in as alternative methods. This is not in accord with the prevailing American opinion. In most types of late syphilis, the treatment recommended is much more prolonged than seems necessary and is increased without justification when the Wassermann remains fast.

Gonorrhea is considered more extensively than syphilis, with overemphasis on the physical details of the various procedures involved in examination and treatment. In treatment, penicillin is given a subsidiary role to the sulfonamides, and mechanical therapy in the form of irrigations and various types of instrumentation is utilized to what seem an unnecessary degree. Several other minor venereal diseases are discussed briefly.

This handbook emphasizes the immediate care of the infectious stages of the venereal diseases and omits many of the more fundamental aspects of these diseases. It is probably of some value from the standpoint of venereal disease control but it is too superficial to be of much use in solving any of the more complex problems that are presented by so many patients with infections in this field.

* * *

SEXUAL BEHAVIOR IN THE HUMAN MALE. By Alfred C. Kinsey, Professor of Zoology, Indiana University, Wardell B. Pomeroy, Research Associate, Indiana University and Clyde E. Martin, Research Associate, Indiana University. W. B. Saunders Company. Price $6.50.

This book is a progress report from a case history study on human sex behavior. It is a fact-finding survey on what people do sexually and what factors account for differences in sexual behavior among individuals, or various groups. There is no discussion as to what people should do.

Although not a medical text in the true sense of the word, it is of value to the general practitioner and specialist, as well as to those interested in science, social work, education and in human conduct generally. Rarely does a scientific study of human behavior create sufficient interest among the laity to make the first page of the *New Yorker*.

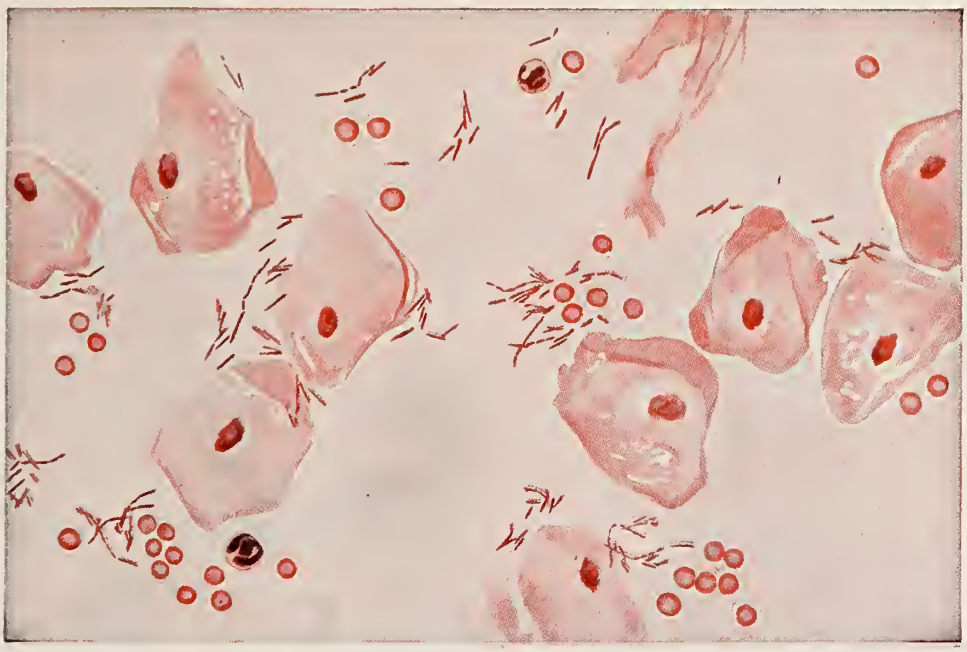
Over 12,000 individuals—criminals, clergymen, teachers, students, prison inmates, men of various ages and position—were interviewed and urged to tell all. The authors expect to interview 88,000 more before they complete their study. Kinsey's tabulated charts show that in certain groups 85 per cent of males have pre-marital intercourse; in the higher intellectual groups this figure drops to 66 per cent. Not more than 62 per cent of the upper-group male's outlet is derived from marital intercouse by the age of 55. Approximately from 20 per cent to 45 per cent of males have extra-marital intercourse; the higher intellectual groups and those of lower ages usually occur in the lower percentage groups. At the age of 20 years, 40 per cent have had intercourse with prostitutes; at 45, 70 per cent. About 98 per cent of males who have not gone beyond grade school have sexual experience before marriage, while only 84 per cent of the high school level, and 67 per cent of the college level is involved.

There is little difference between young males of today and those of ten years or 20 years ago. Statistics show that the war made little difference in sexual behavior; male habits, Kinsey believes, are usually fixed by the age of 16. Men acted about the same way in the armed forces as they would have as civilians; uniforms and the lack of privacy in military life merely made their acts more conspicuous.

Kinsey makes no attempt to revise the sex behavior of the male, but he does think that science should revise its classification of the normal and the abnormal in sexual conduct: "In no other field of science have scientists been satisfied to accept the biologic notions of ancient jurists and theologians, or the analyses made by the mystics of two or three thousand years ago."

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NEW PHARMACEUTICAL - MEDICAL RESEARCH FOUNDATION FORMED

The recently formed Pharmaceutical-Medical Research Foundation, according to an editorial in a recent issue of *The Journal of the American Medical Association;* plans to make extensive studies relating to the chemical and physical changes that occur in tissues and to the physiology of the body—particularly concerning substances taken into the body and their ultimate fate.

The editorial follows:

"When the American Pharmaceutical Manufacturers' Association awarded its plaque to the American Medical Association on December 16, the occasion was signalized by an announcement of the formation of a new foundation to be supported in major part by the pharmaceutical industry, to be devoted to scientific research and to represent a joint effort of the pharmaceutical and medical professions. This foundation, to be called the Pharmaceutical-Medical Research Foundation, is to be modeled after the Nutrition Foundation, which already has a record of important contributions to the advancement of knowledge in that field. The Nutrition Foundation was developed largely through the interest of Charles Wesley Dunn, general counsel for the American Pharmaceutical Manufacturers' Association.

"While many millions of dollars are spent annually in the United States on research of a practical and applied character, the comparative amounts expended on basic research are infinitesimal. Before controlling many of the diseases which still baffle medical science, extensive studies are required related to the chemical and physical changes that occur in tissues and to the physiology of the body—particularly concerning substances taken into the body and their ultimate fate. What part do childhood infections, nutritional deficiencies, fatigue and mental stresses play in the development of the degenerative diseases? These questions and many hundreds like them require positive answers. From such answers will come specific methods of diagnosis, prevention and treatment, which will mean increasing years of health and happiness for more and more persons.

"A committee, including representatives of the pharmaceutical industry and the medical profession, was organized to establish the new foundation. The representatives from the pharmaceutical industry are S. DeWitt Clough, chairman of the board, Abbott Laboratories, Chicago; A. H. Fiske, vice-president, Eli Lilly & Company, Indianapolis; Elmer H. Bobst, president, William R. Warner & Co., Inc., New York; John L. Smith, president, Chas. Pfizer & Co., Inc., Brooklyn; S. Barksdale Penick, Jr., president, S. B. Penick & Co., New York; M. C. Eaton, president, Eaton Laboratories, Inc., Norwich, N. Y., and Charles Wesley Dunn, New York, general counsel for the American Pharmaceutical Manufacturers' Association.

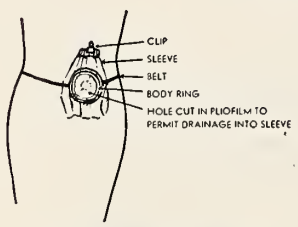
"The representatives from the medical profession are the following officers of the American Medical Association: Dr. R. L. Sensenich, South Bend, Ind., president-elect; Dr. E. L. Henderson, Louisville, Ky.,

(Continued on Page 36)

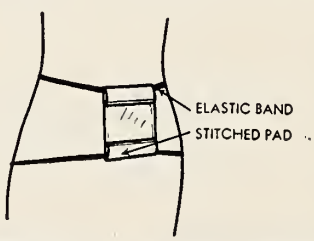
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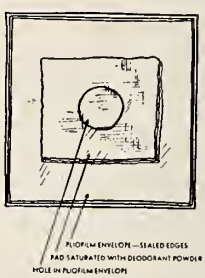
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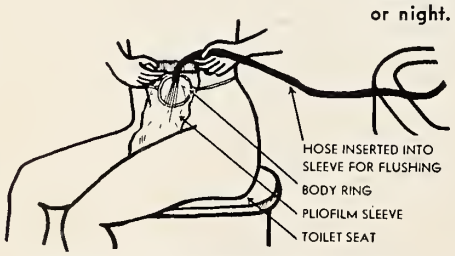
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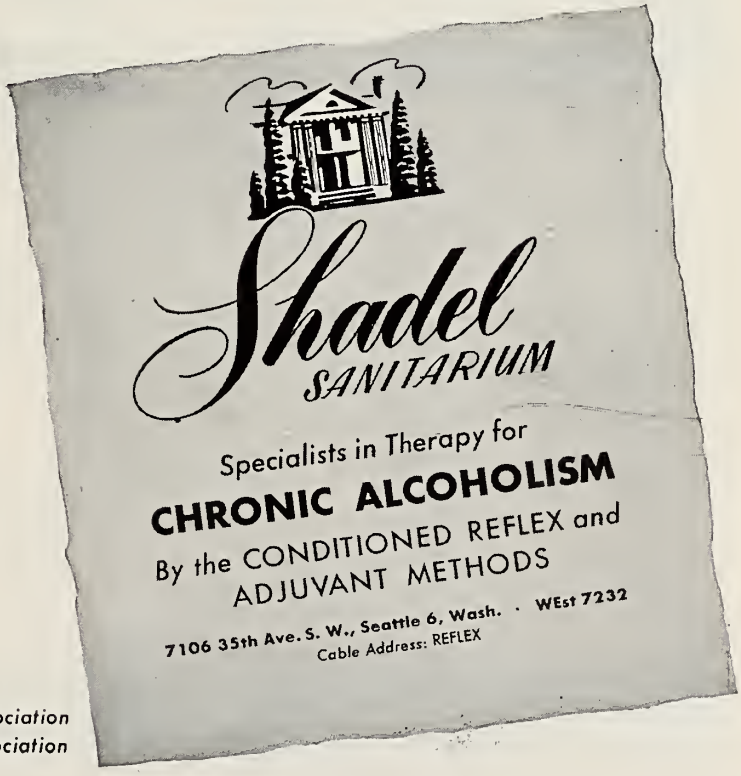
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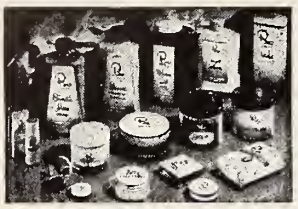
(Continued from Page 34)

chairman of the board of trustees; Dr. Ernest E. Irons, Chicago, secretary of the board of trustees; Dr. Morris Fishbein, Chicago, editor of *The Journal*, and Dr. Austin Smith, Chicago, secretary of the Council on Pharmacy and Chemistry. Dr. Sensenich is chairman of the committee.

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An apparent increase in the incidence of erythroblastosis, a combination of jaundice and anemia due to blood incompatibility which kills about 50 per cent of the infants born with it, is probably due to transfusions of Rh-positive blood given to Rh-negative women. This is the conclusion of an article appearing in a recent issue of *The Journal of the American Medical Association.*

The writers, L. M. Hellman, M.D., and G. R. Vosburgh, M.D., Baltimore, from the Department of Obstetrics of the Johns Hopkins University School of Medicine and the Johns Hopkins Hospital, point out that there are only two ways by which a woman whose blood is Rh-negative (about 15 per cent of all women are in this group) can acquire enough Rh antibodies in her bloodstream to give birth to an erythroblastotic child. The first of these is by repeated bearing of Rh-positive children—and the majority of her children will be Rh-positive if she is married to an Rh-positive man. In such an event her first and often her second child will be spared, however.

The second means by which such a woman may become sensitized is by the administration of an Rh-positive blood transfusion. "Women so sensitized produce Rh-positive chhildren with the severest form of erythroblastosis who usually do not survive," the doctors write.

At the Department of Obstetrics of the Johns Hopkins Hospital there was only one case of erythroblas-

(Continued on Page 40)

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TRANSFUSIONS BLAMED FOR INCREASE IN DISEASE OF BLOOD INCOMPATIBILITY

(Continued from Page 38)

tosis in 1,732 deliveries in 1937, the doctors also report, while in 1946 the incidence was one in 348 deliveries. "Such a phenomenon may well be related to the increased incidence of transfusion known to have taken place," they observe.

A history of previous transfusion occurs in but 2 per cent of all Johns Hopkins patients, yet in 27 instances of erythroblastosis a history of transfusion was present in seven women or 26 per cent. Two other Rh-negative women had also received blood transfusions which gravely jeopardized their subsequent childbearing careers, although the infants safely born to them at Johns Hopkins happened to be Rh-negative because their Rh-positive husbands carried one Rh-negative gene.

"With the increased use of transfusion the chance of unwittingly administering Rh-positive blood to Rh-negative women is definitely increased," Dr. Hellman and Dr. Vosburgh conclude. "Since such transfusions may be disastrous to future childbearing, even though many years may intervene, they can only be regarded as reprehensible; and in our opinion a high degree of negligence may be charged if transfusion is ever given to a female child, or women in the childbearing age, without first determining the Rh compatibility. In cases of dire emergency when time does not permit Rh determinations, only Rh-negative blood should be given."



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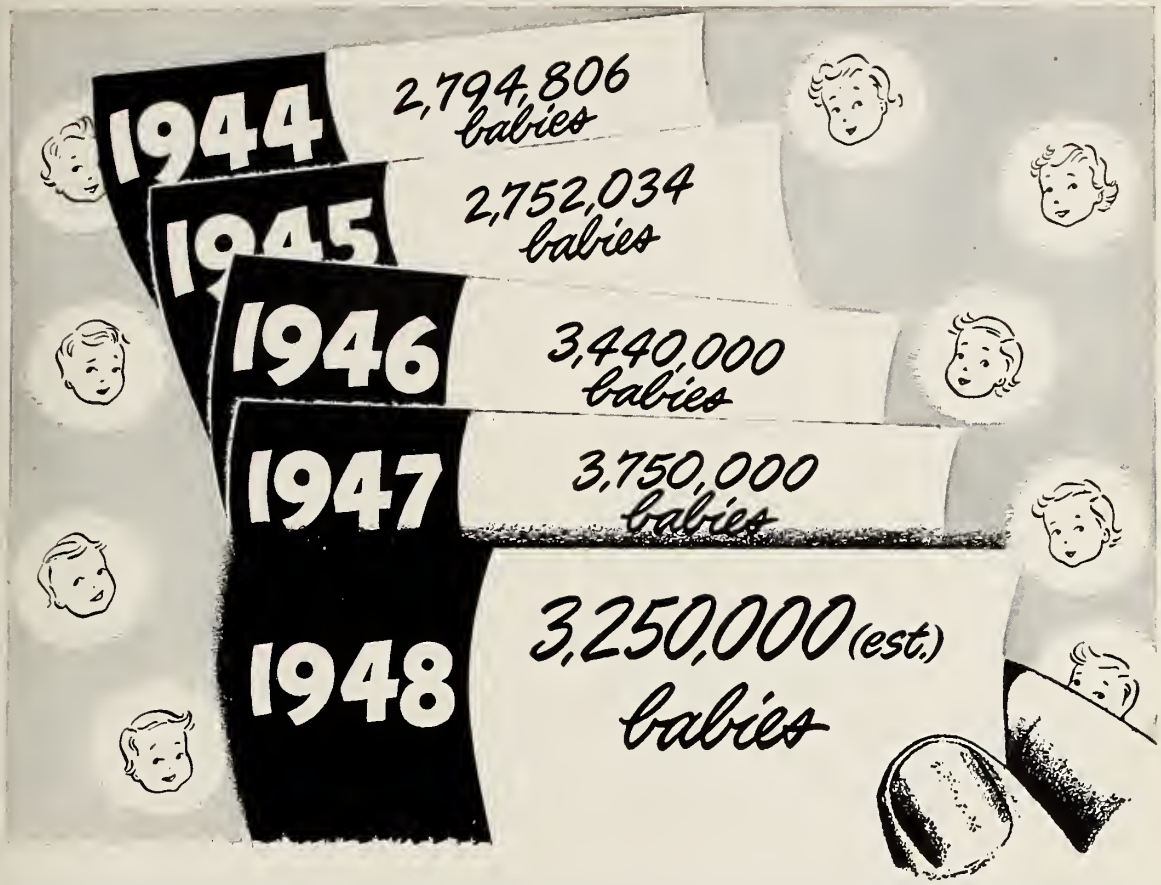
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FEW CHILDREN GET FULL HEALTH CARE ADVISED IN EXAMINATIONS

The time and effort spent on physical examinations of children is in the main wasted unless the remediable conditions discovered at these checkups are actually corrected, Martha Crumpton Hardy, Ph.D., Chicago, chairman of Child Research of the Elizabeth McCormick Memorial Fund, points out in a recent issue of *The Journal of the A.M.A.*

Dr. Hardy reports on a discouraging follow-up of a group of 1,068 Chicago children representing 446 families, who had been examined by the pediatric staff of the Elizabeth McCormick Memorial Fund between September, 1942 and August, 1943. The inquiry was a part of a joint investigation conducted with the Aid to Dependent Children Service of the Cook County Bureau of Public Welfare, since the children were receiving grants as dependent children.

The average age of the children was 10, and the average annual income of their families was around $1,100 in 1942-43. They were all so-called "well children," selected from all areas of the city, and no pressure had been exerted on their families to have them examined. The examinations had revealed that 97 per cent needed some type of health service. Medical attention was advised for 73 per cent, dental services for 67 per cent, protection against either diphtheria or smallpox for 53 per cent. "The most frequent specific problems noted by the physicians as requiring medical attention," Dr. Hardy writes, "concerned tonsils, orthopedic abnormalities, eyes, conditions of the genito-urinary system and of ears and skin. The incidence varied from 31 per cent in the case of tonsil conditions to six per cent for skin."

After the mothers had been told about the remedial care needed, caseworkers visited the families to help plan ways and means of securing the advised services at various clinics. From September, 1942 to January, 1946, periodic checks were made whenever possible, both with the families and with the health agencies, on the care actually secured. In this way it was possible to follow up 789 children representing 328 families for an average period of approximately two and a half years.

According to Dr. Hardy, analyses of the records of these 789 indicates that "attention to some of their needs was secured in the majority of cases but that less than one-third of the children obtained all the care advised." Only 37 per cent of the children needing medical care secured all that was advised. In 29 per cent of the cases where a tonsil operation was advised the families apparently did nothing about it, for example. As an even more serious example, 23 per cent of the children who were referred to a cardiac clinic failed to go and an additional 27 per cent who were known to require supervision were not receiving it.

So far as the other services were concerned, the record was somewhat better. Fifty-one per cent of those needing dental care received it, and 60 per cent of those advised to be immunized against certain diseases completed this service.

(Continued on Page 46)

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Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154; Laryngoscope, Jan. 1937, Vol. XLVII, No. 1, 58-60; Proc. Soc. Exp. Biol. and Med., 1934, 32-241; N. Y. State Journ. Med., Vol. 35, 6-1-25, No. 11, 590-592.

FEW CHILDREN GET FULL HEALTH CARE ADVISED IN EXAMINATIONS

(Continued from Page 44)

The reasons for the general failure to complete all health services, Dr. Hardy believes, were numerous. An attempt was made by most of the families: only 7 per cent failed to report at least once to either a clinic or a private physician or dentist for some part of the services advised. But each child usually required care for several different conditions.

"The reason most frequently expressed by the families for their failure to return for care, and also for their failure to report at all, was that the children seemed well. . . . [But it also] seemed to numbers of them that the clinic failed to realize the difficulty that the mother faced in keeping the various appointments for individual children made for different times instead of for the family as a group. Many complained of the numerous visits to different specialized clinics before the advised care for even one child could be carried out. They referred to the great distances they had to travel, the problem of taking a number of children to and from clinics, and the children's unwillingness to continue under clinic care. . . . Then, too, after the family had received some medical attention, if hospitalization or surgical treatment was required immediate care was usually not possible."

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PERIODIC DISEASE PRESENTS PUZZLE TO MEDICAL INVESTIGATORS

The mystery of periodic disease—symptoms of unknown origin which last several days and recur for years at remarkably regular, short intervals—is reviewed in a recent issue of *The Journal of the American Medical Association*. The author is Hobart A. Reimann, M.D., Philadelphia, from the Jefferson Medical College and Hospital.

Dr. Reimann reports the cases of six patients with periodic diseases who are still under observation, comparing them with 22 cases reported by other doctors. Twenty-one of the 28 were men patients. Although the symptoms differed—fever and abdominal pain were apparently among the most common—all cases shared the following features:

1. There were periods of temporary disability, recurring for years with predictable accuracy and uniformity, followed by intervals during which the patient felt well.
2. No cause for the condition could be discovered.
3. The interval between attacks was about seven days or some multiple of seven.

Referring to the last feature, the writer comments: "Some, so inclined, may attach mystic significance to this, particularly in respect to the age-old importance associated with the numeral seven and of the numerous allusions to it. It was suggested that a

(Continued on Page 50)

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PERIODIC DISEASE PRESENTS PUZZLE TO MEDICAL INVESTIGATORS

(Continued from Page 48)

latent or overt cyclic rhythm of this duration in mankind led to the establishment of the seven-day week not on an astrologic or religious basis, but as the projection of a physiologic periodicity."

Dr. Reimann concludes that these cases "may be unrelated medical curiosities, or more probably, some or all of them may have a common underlying basis to weld them as a syndrome of periodic disease with different manifestations. It is important to know that such benign periodic conditions exist in order to protect the victims from unnecessary diagnostic expense and discomfort and from the hazards of unnecessary therapeutic and surgical procedures."

STUDY QUESTIONS GERMICIDAL EFFECT OF CERTAIN MERCURY COMPOUNDS

Doubt as to whether the use of mercury compounds in their commercial concentrations is justified by their actual antiseptic effects is expressed in a study by three Philadelphia bacteriologists, reported in a recent issue of *The Journal of the American Medical Association.* Experiments on mice by the three men showed that bacterial cultures exposed for 10 or even 15 minutes to "mercurochrome," "merthiolate" and "metaphen" could still produce fatal disease.

The three scientists, Harry E. Morton, Sc.D., Leon L. North, Jr., M.D., and Frank B. Engley, Jr., M.S., Philadelphia, all from the Department of Bacteriology of the University of Pennsylvania School of

(Continued on Page 58)

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TROPICAL DISEASES CREATE NEW DIAGNOSTIC PROBLEMS IN U. S.

Kala-azar, a tropical disease, should be considered in diagnosing cases of obscure fever in servicemen who have spent time in areas where kala-azar is endemic, according to an article in a recent issue of *The Journal of the American Medical Association.*

The writers, Captain Moise D. Levy, Jr., Medical Corps, Army of the United States, and First Lieutenant Marvin J. Yiengst of the Sanitary Corps, both from the Army Air Forces Regional Station Hospital, San Antonio, Texas, cite the case of a young pilot officer who developed the disease 17 months after he had returned to the United States from the African continent. Because of the long incubation period, kala-azar was not at first suspected as the cause of his symptoms.

Kala-azar is caused by an organism apparently transmitted to man by the bite of one of several species of the sandfly. "During the recent war and continuing even to the present time several hundred thousand American troops were and are stationed in the several parts of the world where kala-azar is endemic." the writers point out, "the most important of which are Eastern India, Burma, Northeastern China, Southern Italy and the Mediterranean coast of North Africa.

"The onset of the disease may be sudden with high temperature, chills and vomiting, or it may begin gradually with a low grade fever and relatively mild general symptoms. The incubation period varies from 10 days to 18 months. The disease produces progressive loss of weight with noticeable wasting of the muscles. There is anemia present, usually becoming evident after the first month of the disease. The total number of white blood cells is greatly reduced. There is only one means for the positive diagnosis of this disease and that is to demonstrate the causative organism in tissue taken from the patient."

In the case cited, the patient's symptoms were originally believed to be those of malaria. Treatment with quinacrine and then penicillin was given until the kala-azar organism was found in his bone marrow tissue, when treatment with ethylstibamine was begun. The young man recovered quickly and completely.

An editorial in the same issue of *The Journal* points out that the adequate laboratory facilities needed for diagnosis of kala-azar and similar exotic diseases are not available to all practicing physicians in the United States. "Nevertheless exotic disease must now be constantly suspected," the editorial continues.

"Diseases probably most frequently met will be malaria, bacillary dysentery, amebiasis, filariasis and intestinal protozoan infestations. These will be seen in areas where they were formerly rarities or nonexistent. Others, such as kala-azar, African and South American trypanosomiasis, cutaneous leishmaniasis, schistosomiasis, yaws and pinta will occur in scattered numbers. Prevalence of leprosy in areas where troops were stationed makes appearance of a few cases after long incubation periods almost inevitable. . . .

(Continued on Page 62)



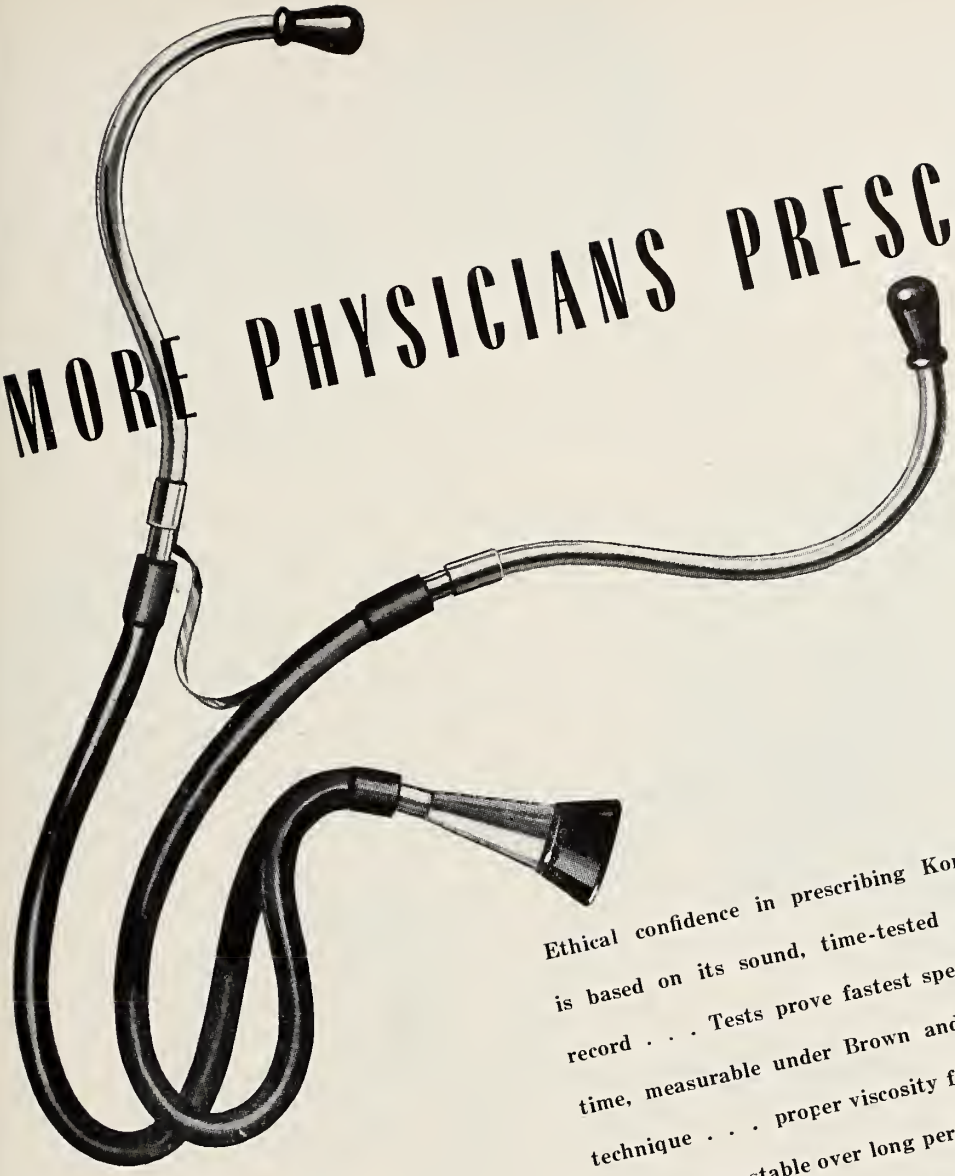
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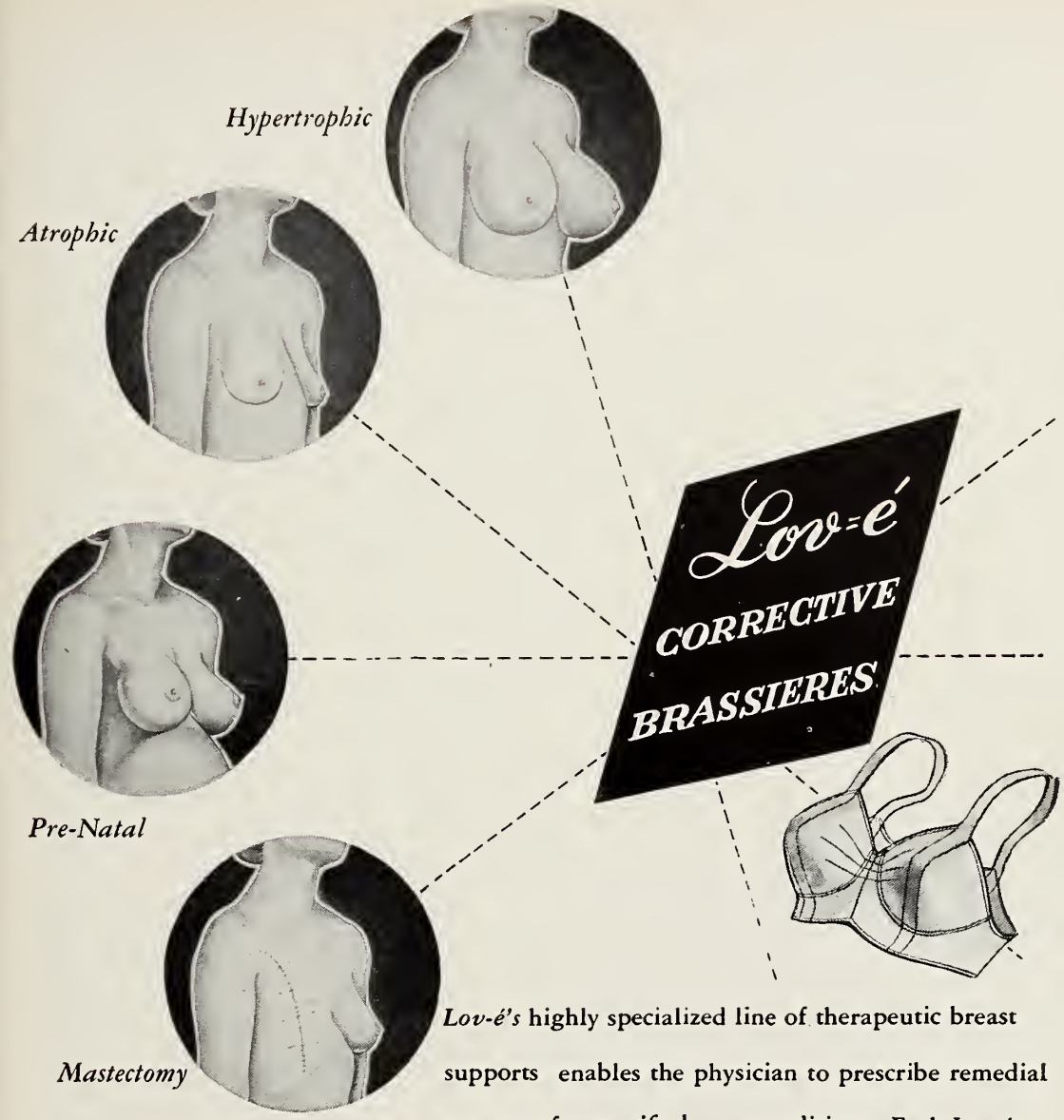
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STUDY QUESTIONS GERMICIDAL EFFECT OF CERTAIN MERCURY COMPOUNDS

(Continued from Page 50)

Medicine, were aided in their study by a grant from the Council on Pharmacy and Chemistry of the American Medical Association.

The organism selected for their study was Streptococcus pyogenes, which produces disease in man as well as in laboratory animals. A culture of the bacteria was mixed with each of the germicides in their marketed solutions and, after an interval, injected into a number of mice. Nearly all the mice died, and presence of the organisms was demonstrated in their heart's blood after death. Of the three, "metaphen" seemed to have had the most powerful germicidal effect, as registered by the proportion of mice which survived.

"Whether other infectious agents would differ and lose their virulence when exposed to mercury may well be investigated," the Council on Pharmacy and Chemistry suggests. "Actually, in other experiments in the same laboratory it has been found that the infection of laboratory animals by influenza virus may be prevented by their exposure to mercurochrome, merodicein, metaphen and phenyl mercuric nitrate; merthiolate was ineffective. Others have reported the effectiveness of mercurochrome, in inactivating in vitro the virus of poliomyelitis. The field of usefulness of organic mercurials should be explored, proved and defined.

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TROPICAL DISEASES CREATE NEW DIAGNOSTIC PROBLEMS IN U. S.

(Continued from Page 54)

"Proper cure of the patient and primary protection of the community will depend on the physician's diagnostic ability. . . . Many of the diseases mentioned . . . having passed through the acute stage and entered on a mild intermediate or chronic stage, present themselves in the patient in masked form. . . . In view of the added stress placed in recent years on the psyche and the fact that these same symptoms are frequently met in psychoneurotic patients, differential diagnosis becomes doubly interesting, challenging and difficult."

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(Continued from Page 8)

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INTERNIST, Diplomate of the American Board, FACP, several years' successful private practice; four years with Navy, serving as internist to naval hospital; California license; for further information, please write Burneice Larson, Director, Medical Bureau, Palmolive Building, Chicago 11.

ORAL SURGEON is available; B.S., DDS western schools; several years general practice of dentistry before specializing in oral surgery; some teaching experience; licensed in California; for further information, please write Burneice Larson, Director, Medical Bureau, Palmolive Building, Chicago 11.

YOUNG SURGEON, Diplomate of American Board, is available; training, which covered five years, included year's residency in cancer surgery; considerable teaching and research experience; California license; for further information, please write Burneice Larson, Director, Medical Bureau, Palmolive Building, Chicago 11.

VETERAN, age 38, just completing 3-year urological residency at one of the largest hospitals in country. Wish to settle in San Francisco. Have $5,000 to invest. Would like associate with certified urologist. Box 13,090, California Medicine.

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Tales and Details



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Hypertussis, our concentrated hyperimmune anti-pertussis serum, is Cutter's specific blood fraction for protection of the non-immunized —or treatment of youngsters seriously ill with whooping cough.

Infants are hardest hit by this disease. I read about a typical case just last week —

> This baby was desperately sick when first seen —depleted from food loss and the exhaustion of violent coughing. She was put under oxygen, and although it looked pretty hopeless, injections of Hypertussis were given — with remarkable results. The paroxysms decreased rapidly and the infant began to respond to general therapy.

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Just in case you think I'm too prejudiced — here are two "quotes" on Hypertussis from some of the boys who know their clinical facts.

> At the AMA Section on Pediatrics, an outstanding paper on whooping cough serums concluded with this statement: "Our results suggest that human hyperimmune serum or globulin should be used in the treatment of all infants who are seriously ill with whooping cough."(1)

> Another study on *the use of Hypertussis in 26 uncomplicated cases reports:* "Results of treatment were considered excellent in 14, good in 4, moderate in 4, and equivocal in 4. No patient became worse or died. Very striking was the fact that no patient in this group developed pneumonia or any other complication of pertussis..."(2)

If you'd like to read the complete articles, write for reprints.

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1. Kohn, Fischer, et al., Am. Jour. Dis. Child. Sept., 1947
2. Brainerd, Henry, Jour. Ped. Jan., 1948

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BRUCELLOSIS BEST TREATED BY SULFADIAZINE, STREPTOMYCIN

Investigations carried out over a 10-year period in the laboratories and clinics of the University of Minnesota Hospitals indicate that combined treatment with streptomycin and sulfadiazine is more effective against human brucellosis (undulant fever) than any other known therapy, four physicians announce.

The Brucella organism is transmitted to humans by contact with diseased hogs, goats or cows, or by drinking the milk of infected animals.

Writing in a recent issue of *The Journal of the American Medical Association*, the four doctors report the cases of more than 30 patients with active brucellosis whom they studied and observed, and whose treatment they directed. The writers are Wesley W. Spink, M.D., Wendell H. Hall, M.D., James M. Shaffer, M.D., and Abraham I. Braude, M.D., from the Division of Internal Medicine, University of Minnesota Hospitals and Medical School, Minneapolis.

The December 20, 1947, issue of *The Journal of the America Medical Association* carried a report on the successful treatment of a single case of undulant fever by combined streptomycin and sulfadiazine therapy. The scope of the present writers' investigations enables them to draw more definite conclusions, however.

In the hospital laboratories, they report, the antibrucella properties of the sulfonamide compounds and the antibiotics were tested on chick embryos which had been inoculated with a culture of Brucella. Used separately, sodium sulfadiazine and streptomycin both prolonged life, but in a majority of cases failed to destroy Brucella organisms. Only the two in combination achieved that.

Both before and after these chick embryo experiments had yielded results, human patients with bacteriologically-proved brucellosis were being treated and studied in the University of Minnesota Hospitals. Many had been ill for several months, and severe complications were present. From the types of treatment tried, the doctors report the results which might have been expected from the chick embryo experiments: in both acute and chronic brucellosis cases, a sulfadiazine-streptomycin combination brought the most satisfactory results. Furthermore, other patients whose symptoms pointed to brucellosis as the most probable diagnosis also responded well to the combined therapy, although the presence of Brucella organisms in their tissue or body fluids had not been proved.

Exceeded in importance by only three other communicable diseases—tuberculosis, syphilis and gonorrhea—undulant fever has baffled medical men for many years. The forms which the disease takes are extremely variable, and even after apparent recovery the Brucella organism may remain in the patient's tissues. Relapse and recurrence of symptoms have therefore been common.

"The fundamental requisite of successful therapy for human brucellosis is that treatment should not only control the infection but that Brucella should

(Continued on Page 12)

"the substance from which they obtain the greatest comfort"...



"Some patients are relieved of hot flushes by synthetic drugs, but fail to obtain quite the sense of well-being they experience when given natural estrogens; there is no reason to deny these patients the substance from which they obtain the greatest comfort."[1]

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Amniotin is well tolerated. It is readily metabolized by the body, and detoxified by the liver. Moreover, the natural estrogens in therapeutic doses are less likely to induce menopausal bleeding or hyperplasia of the endometrium.[3]

Whether symptoms are mild, moderate or severe, oral and intramuscular forms of Amniotin in a variety of potencies fulfill every need. Capsule suppositories are also available.

BIBLIOGRAPHY:
1. *Texas State J. Med.* 52:683 (Apr.) 1947.
2. *J. Clin. Endo.* 3:89 (Feb.) 1943.
3. *J.A.M.A.* 134:1141 (July 26) 1947.

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BRUCELLOSIS BEST TREATED BY SULFADIAZINE, STREPTOMYCIN

(Continued from Page 10)

be eradicated from the tissues," the doctors write. "This therapeutic principle has been the basis for seeking out a more satisfactory form of specific therapy in this clinic."

Sulfonamide therapy obviously did not eradicate Brucella from the tissues in well over one third of the 20 patients who were treated with one of the sulfonamide compounds alone. "Furthermore, recovery in some of the remaining patients might well have been independent of sulfonamide therapy and more directly associated with bed rest."

Streptomycin therapy, administered to seven patients, did not result in a single complete recovery, and in three instances had to be discontinued because of toxic reactions. One patient died from complications, even though Brucella had been eradicated from his tissues and blood. As a result of this, and as a result of the investigations which by this time were under way with the chick embryo technic, it was decided to abandon the use of streptomycin alone in favor of combined treatment with streptomycin and sulfadiazine.

Nine patients—six with acute brucellosis, three with the chronic form of the disease—were finally treated simultaneously with sulfadiazine and streptomycin. As a result, all but one gave every indication of recovery. The treatment also was effective in cases

(Continued on Page 16)



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BRUCELLOSIS BEST TREATED BY SULFADIAZINE, STREPTOMYCIN

(Continued from Page 12)

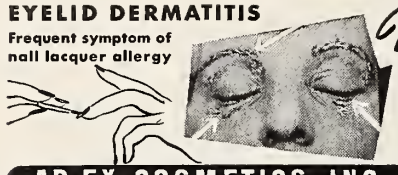
with serious complications of brucellosis. One of the apparently cured patients relapsed after treatment was discontinued, but a more prolonged course of treatment resulted in his actual recovery. In the remaining case the course of therapy was interrupted by complications; after an intensive program of chemotherapy he too improved slowly. Even in his case there was no recurrence of brucellosis.

"It remains to be seen whether the combined therapy will be satisfactory in so-called chronic brucellosis, that is, in patients having a vague type of illness," the doctors conclude.

"Although combined therapy with streptomycin and sulfadiazine has yielded the most satisfactory results to date in this clinic, the intensive investigations on other antibiotics going on at the present time may bring forth other agents more effective against Brucella than streptomycin."

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SULFONE DRUGS MOST EFFECTIVE KNOWN TREATMENT FOR LEPROSY

The sulfone drugs will probably replace chaulmoogra oil in the treatment of leprosy until a better treatment is evolved, a doctor from the United States Marine Hospital (National Leprosarium), Carville, La., predicts in a recent issue of *The Journal of the American Medical Association.*

The writer is Paul T. Erickson, M.D., senior surgeon in the U. S. Public Health Service. (Co-author of the article was G. H. Faget, M.D., medical director in the U. S. Public Health Service, who died in July, 1947.) Dr. Erickson reveals that during 1946 sulfone treatment more than doubled the number of leprosy patients who could be discharged from the Leprosarium as arrested cases, compared with the annual average in the 10-year period before these drugs were used. Furthermore, the number of deaths was less than half the annual average for the same period.

Promin, diasone and promizole were the drugs used. "With but few exceptions," Dr. Erickson writes, "only patients with depromatous leprosy, and mostly with far advanced disease, have been subjected to sulfone therapy. While no claim is made that these drugs are specific remedies, they have proved therapeutically more effective in leprosy than any previous treatment tried at the Carville Leprosarium.

"Unfortunately they work slowly. Definite objective improvement, as a rule, seldom becomes manifest before six months of treatment. The percentage of patients improved is in direct proportion to the duration and the intensity of treatment. It is our impression that the progress of improvement is similar with each of the three drugs.

"After six months of treatment almost 25 per cent of the patients show some improvement. After one year this percentage is increased to 60, after two years to 75, after three years to almost 100. Even far advanced lepromatous disease is checked and improves under treatment. The extent of improvement usually varies proportionately with the size of the dosage tolerated by the individual patient.

"The promin and diasone groups comprise 317 patients who have been treated for varying periods up to six years. In the promin-treated group there are 178 patients; in the diasone-treated group 121 and in the group that received both drugs 18.

"Thirty-one, or 17.4 per cent of the promin-treated patients have been discharged as with arrested disease. There have been no known relapses, and 11 of these patients have chosen to remain under observation in the institution. The period of observation following arrest of the disease has varied from a few months to three years.

"Seven, or 5.8 per cent of the patients treated with diasone have been discharged with arrested disease. Four of these have since remained under close observation for four months to two years without recurrence of the disease.

"The group of patients having received both promin and diasone present no cases of arrested disease, although one who has had about four years of treatment will soon meet the necessary require-

(Continued on Page 22)

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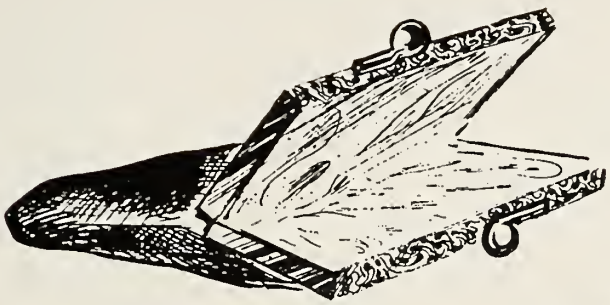
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SULFONE DRUGS MOST EFFECTIVE KNOWN TREATMENT FOR LEPROSY

(Continued from Page 20)

ments. These patients because of intolerance to the drugs or for other reasons were rather irregular in taking treatment.

"That the percentage of patients discharged as with arrested disease for the entire period is greater in the promin than in the diasone group can, perhaps, best be explained by the fact that the patients treated with promin have been under treatment for a longer time.

"The ultimate value, however, of sulfone therapy in leprosy is not definitely established. This must await the test of time, five to 10 years and possibly even longer. Only then can one be reasonably sure that relapses will not occur."

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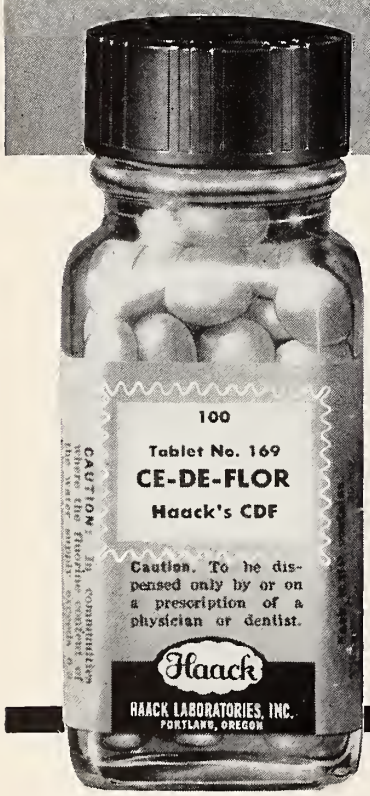
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ACTION NEEDED TO PREVENT EPIDEMIC OF HUMAN PLAGUE IN U. S.

If proper preventive action is not taken immediately, the United States may find itself in the middle of an epidemic of human plague, according to an editorial in a recent issue of *The Journal of the American Medical Association.*

The editorial follows:

"Human plague appeared for the first time in the United States in the Chinese quarter of San Francisco March 6, 1900. Between that date and January 1, 1940, eight states reported cases of human plague —Washington, Oregon, California, Utah, Nevada, Texas, Louisiana and Florida. During 1946 infection had been found in ground squirrels and other rodents as far east as the Mississippi Valley. The United States Public Health Service has conducted campaigns for the eradication of infected rodents since 1908. The budget for such eradication dropped from $200.000 in 1912 to $51,000 by 1915. This campaign, coupled with efforts by the individual states, still continues but has languished considerably.

"R. H. Creel, M.D., estimated in 1941 that a well organized and well sustained campaign financed by approximately $2,500,000 would virtually eliminate rodent plague in the United States. To date the

(Continued on Page 28)



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ACTION NEEDED TO PREVENT EPIDEMIC OF HUMAN PLAGUE IN U. S.

(Continued from Page 24)

needed funds have not been forthcoming. This condition is a definite threat of human plague in epidemic proportions in the United States. The main conditions necessary for epidemics of human plague are infected rodents, the flea transmitter and susceptible persons in close proximity. Overcrowded housing conditions in many large cities tend toward the establishment of the conditions necessary to epidemic outbreak. Proper preventive action is needed immediately."

SURGERY RELIEVES SOME TYPES OF SEVERE ONE-SIDED HEADACHES

Surgical treatment should be considered for persistent and severe one-sided headaches after drugs or other conservative measures have failed to bring relief, according to Walter G. Haynes, Jr., M.D., Birmingham, Ala., writing in a recent issue of *The Journal of the American Medical Association.*

Dr. Haynes reports that 87 per cent of the 47 patients to whom he has given such treatment have received lasting relief. Conservative treatment afforded relief in only 32 per cent of 25 other cases.

(Continued on Page 30)



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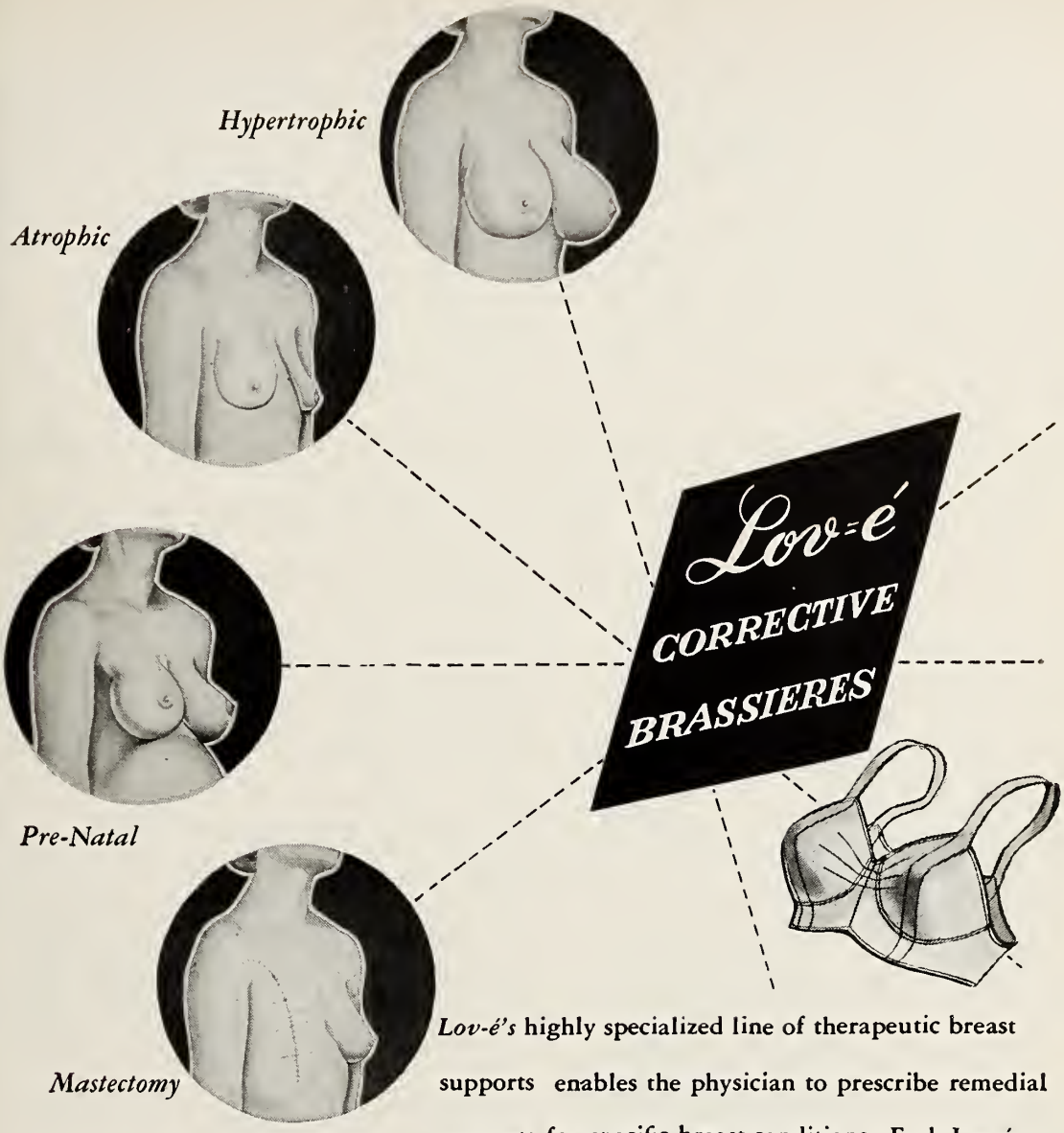
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SURGERY RELIEVES SOME TYPES OF SEVERE ONE-SIDED HEADACHES

(Continued from Page 28)

The pure migraine headache is not the type for which he recommends surgery, although the symptoms often resemble those of migraine. He classifies his patients' headaches as follows:

1. Severe pain in which the blood vessels in one of the temples are constricted.
2. Pain that travels up over a nerve in the back of the skull, then along the arteries of one of the temples and the arteries close to the temple, on the inside of the skull.
3. Inflammation of the nerve roots in the neck due to mechanical pressure on a nerve in the back of the skull.

Dr. Haynes believes that all three types of headache are caused by sympathetic pain fibers accompanying the artery which starts at about the level of the neck and gives off many branches to the face and skull. (The areas of pain described are covered by these branches.)

Surgical treatment consists of cutting out a part of the offending arterial branches or, in the third type of headache, removing part of the sensitive nerve in the back of the skull. The sympathetic pain fibers are thus kept divided.

"Neither of these procedures is hazardous," Dr. Haynes writes, "and in trained hands they do not constitute any danger to the patient's life or allow any untoward sequelae. There have not been any fatalities in this series."

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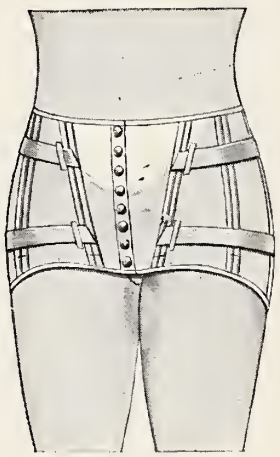
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VOL. 68 MAY, 1948 No. 5

The Responsibility of Medicine

JOHN W. CLINE, M.D., *San Francisco*

DURING the past year I have had the honor of serving as your President and this occasion marks my final appearance before you in an official capacity. I therefore wish to take this opportunity to thank the members of the Association for their loyalty to it and for the almost uniform support and cooperation accorded the program of the Association as ordered by the House of Delegates and carried out by the Council. Had it not been for the loyalty of a great majority of the members of the Association the efforts of the Officers and Council in your behalf would have been greatly impaired.

Service as President or in other official capacity in the California Medical Association is an honor—and a great one, but it is likewise a responsibility. Daily contact with the affairs of medicine and concern about its problems cannot but impress upon the mind of one who seriously undertakes to serve your interests certain items of first importance. It is concerning these that I speak at this time. In so doing I shall be frank. Present circumstances call for plain speaking. This is not the time for equivocation.

ACHIEVEMENTS OF MEDICINE

We, who have devoted our lives to medicine, know of its great achievements in preventing and alleviating human ills. The record of advances in the understanding, diagnosis and treatment of disease is remarkable and gains lustre with each passing year. If one looks back to the beginning of this century he cannot but be astonished at the strides made in this comparatively short period.

To try to enumerate them would be futile but one briefly may call attention to the almost complete mastery of such scourges as typhoid, malaria, yellow fever and plague—the important steps toward the control of tuberculosis, venereal disease, and other communicable diseases—the identification and study of viruses—the development of radiology from the primitive Roentgen ray to the products of nuclear fission—the development of chemotherapeutic and antibiotic agents—the extension of surgical procedures into fields of therapy and parts of the body previously considered inaccessible.

We have a justifiable and pardonable pride in these accomplishments and in the desire to minister to mankind which motivates most of the profession and which has wrought a tradition of charity toward our fellowmen. We who live medicine, however, may not see it in proper perspective. We may accord it a place of undue importance in the scheme of things. If this be true, and I believe it is, it is not a manifestation of narrow and selfish interests but rather the natural result of our devotion to our profession and to human welfare.

POSITION OF MEDICINE IN SOCIETY

We must recognize that our estimates are not necessarily shared by others and that medicine will never occupy the position in the minds of the public which it does in ours. There are exceptions such as Voltaire who, in his "Philosophical Dictionary" wrote:

"But nothing is more estimable that a physician who, having studied nature from his youth, knows the properties of the human body, the disorders which assail it, the remedies which will benefit it, exercises his art with caution, and pays equal attention to the rich and the poor."

There are other such encomiums but they also express individual points of view.

Medicine, however, does occupy an important place in an integrated society and being a part of it is subject to the stresses and strains of changing environment. In a world as disturbed as the one in which we live those changes may be rapid and violent.

The factors which influence the course of human events are many. Some are accidental, others result from the evolution of ideas and still others are by design. Propaganda may have a temporary impor-

Address of the President, California Medical Association, delivered before the Seventy-seventh Annual Session, April 11, 1948, San Francisco.

tance and may even influence the evolutionary process, but by and large, the progress of evolution is determined by worthwhile factors.

We must, therefore, accept some change as inevitable and strive to guide the course of events in such a manner that medicine will be preserved. There is no such thing as manifest destiny. Until the future has become history it lies within the power of men to shape its course.

This, then, is the responsibility of medicine.

FUNCTIONS OF THE MEDICAL PROFESSION

The primary function of the medical profession in our society is to provide the public with medical care of high standard. The continuing improvement in the standards of medical care is dependent upon the excellence of medical education, the maintenance of adequate graduate training and the supplying of helpful and practical postgraduate education. These all are important but of even greater importance is the preservation of the freedom of medicine. Socialization would inevitably bring about a deterioration of standards, of and by itself.

This has been true wherever it has been put into effect. The most recent example is that of New Zealand. The Prime Minister of the Labor Government responsible for its introduction recently characterized current medical care in that country as comparable to "passing sheep through a dip." A similar and closer instance of this tendency was to be found in the Health Service System of Municipal Employees in San Francisco until the positive stand of the medical profession interrupted it.

Assembly line methods cannot be applied with success to medical care. The ultimate effect is now being felt in England, where, I am informed, the quality of medical students has sharply fallen off. It is reasonable that young men and women of ambition and ability would decline to devote the years of arduous study required by medicine when in the end the only prospect would be entrance into a regimented profession. Should this situation endure it will mean a progressive lowering of the esteem in which British medicine is held throughout the world.

No greater catastrophe in the field of medical care could befall the people of this State or Nation than the creation of a tax supported, bureaucratic and politically dominated plan of medical care. We, of the medical profession, have been criticized as selfish in our opposition to socialized medicine. It is a striking paradox that a profession which has continuously sought to prevent the diseases it treats and which devotes such a large portion of its time and effort to charity, should be so charged.

It is also worthy of note, that those who espouse compulsory sickness insurance number practically no practicing physicians among them. Is it possible that those who deal with illness know less of its care than those who have little or no contact with it? This was apparently the opinion of the Federal Security Administrator when he appointed the members of the National Health Assembly which is to convene in the near future to plan for the health needs of the United States for a period of ten years.

A second function of the medical profession is to see that the high standard of medical care it provides is available to the people at a cost that is within the reach of the great majority. It may be true that we have no greater moral responsibility in this regard than do others supplying essential service to society, but it is obvious that enlightened self-interest and good citizenship dictate that we so do.

The only sound argument which has been advanced in favor of compulsory sickness insurance is the unbudgeted cost of serious illness. This is no longer a valid argument because of the easy availability of the many sound voluntary prepaid programs.

ADVOCATES OF SOCIALIZATION

Who, then, are the proponents of socialized medicine? Too great generalization is always dangerous but most of them fall into clearly recognizable groups.

One group is composed of sincere, well meaning individuals who are humanitarians at heart but are ignorant, misinformed or misled by propaganda. We readily admit that problems still exist in the distribution of medical care, but we have demonstrated these to be far less important than the advocates of socialized medicine would have the people believe. In addition they are now in the process of orderly solution within the existing framework of private enterprise. It, therefore, devolves upon us to educate these people and to show them that the remedy they wish to apply is much worse than the condition they seek to correct.

The second group is far more dangerous. It is made up of persons with political, social and economic views which are not American in origin. These are the so-called "social planners" who plan progressively decreasing freedom for the individual and increasing power for the State. Some are part of an international group which places party above country and who have been directed to socialize medicine as the first step in taking over our country. The Wagner-Murray-Dingel bill exactly follows the lines laid down by the International Labor Organization. We well understand the significance of this.

The investigations by the Harness Committee of the House of Representatives reveal the degree to which this group has infiltrated the administrative agencies of Government and the extent to which tax funds have been used to propagandize the unsuspecting taxpayers in the effort to impose socialistic programs upon them.

The third group is represented by certain politicians who appeal for support on the basis of "something for nothing," and who selfishly would grasp the opportunity to make misleading promises concerning the health and welfare of the people into a stepping stone to high office.

METHOD OF PROCEDURE

How are we to counter those who would destroy medicine as we know it and in exchange provide regimentation of the people and the profession alike? What measures can we adopt to forestall the fraud

of the substitution of inferior medical care at a premium cost in dollars and at the sacrifice of another segment of individual freedom?

Edmund Burke, the British political writer of the Eighteenth Century and a supporter, in Parliament, of the rights of the American Colonies once said: "People never give up their liberties except under some delusion."

This is a time which requires careful thought. Some years ago a member of our House of Delegates said "Medical politics is a harmless pursuit for those who enjoy it." If there were no more important questions involved than the decision as to who should have the honor of this or that office this statement still would be true. In the current era, politics for politics sake is hazardous and has no place. This is particularly the case when medical politics descends to the level of defeatist propaganda and carping, destructive criticism coupled with false and misleading statements.

There are vital issues at stake and our course of action should be based upon principle and wisdom. This is a time which demands medical statesmanship as opposed to medical politics. In the words of Burke, "A disposition to preserve and an ability to improve, taken together, would be my standard of a statesman." We could well apply his definition to the conduct of our own affairs.

There are those among us who claim that the threat of socialized medicine is "as dead as a dodo." And, this, in spite of all evidence to the contrary. More than fifty bills providing compulsory sickness insurance were introduced into the Congress, the legislatures of sixteen states, including California, and the Territory of Hawaii last year. A Constitutional Amendment of similar nature was introduced into the recent budget session of our Legislature. Hawaii and Nevada expect bitter struggles this year.

The dodo is extinct. Can one say that of the Trumans, the Wallaces, the Warrens, the Davises, the Altmeyers, the Falks, and the Parrans?

The answer is obvious. This being the case, are we supinely to accept the fate prepared for us by the politicians and the planners? There is only one possible reply. We owe it to the people and we owe it to ourselves and our successors not to permit this to come to pass.

How then should we proceed? Should we rely on other agencies, less well equipped than we, to perform the task or should we do it ourselves? If we undertake it should we do it in a feeble, half-hearted way or should we, with courage and confidence, go all out?

BASIS FOR PROGRAM

In May, 1944, Mr. Little reported to the House of Delegates the findings of the public relations survey conducted by his company. Everyone who heard his presentation was impressed by his integrity and ability. For the details of his report I refer you to California and Western Medicine of May, 1944. Briefly his major findings were:

1. The principle complaint of the public against the profession was the cost of medical care.
2. The people desired prepaid medical care.
3. They preferred voluntary methods to governmental control.

Mr. Little further pointed out that we had in California Physicians' Service the instrument of solution of our problems. He recommended expansion and improvement of our prepaid program.

In January, 1945, we were confronted by the determined effort of Governor Warren to impose socialized medicine upon the people of California. The House of Delegates met in special session and made its decision to oppose the Governor's program on the basis of Voluntary versus Compulsory Health Insurance.

You all recall the history of that fight. I recently have reviewed the newspaper accounts of it. The critical point was reached on April 10, 1945, when the Assembly, by a vote of thirty-nine to thirty-eight refused to force the Governor's bill out of Committee and to the floor of the House.

In May, 1945, the House of Delegates directed a far-reaching public relations program based upon the recommendations of the Little report and the stand of the House in January. It voted one hundred dollars dues to finance this program and to build a reserve in the treasury in order to be prepared for future eventualities. This program was reindorsed by the House in May, 1946, and again in May, 1947.

RESULTS OF PROGRAM

It is now time to evaluate that program and to ask what it has accomplished. A brief resume of the results is as follows:

1. More than 200 state-wide organizations, having an important influence upon public opinion, have gone on record as opposed to socialized medicine.
2. More than 400 newspapers have announced opposition to such a program, and one important metropolitan paper which had endorsed the Governor's 1945 program has withdrawn its support.
3. More than 120 mayors and numerous other public officials have sponsored Voluntary Health Insurance against a compulsory plan.
4. One influential organization which vigorously supported the Governor in 1946 has voted its 1947 award for the best educational California radio program to "California Caravan." Our radio presentation also has been nominated for the Peabody Award as the finest educational drama on the Pacific Coast.
5. The California Medical Association has won the respect and the support of business, industry and farm groups by its vigorous efforts in combating socialization.
6. Wide expansion of Voluntary Health Insurance has been achieved. California Physicians' Service has grown from 176,000 to well over half a million. The Blue Cross plans have increased from 350,000 to about 700,000 members. The private insurance companies have added to the number of their policies by about 2,000,000. It is estimated that over 5,000,000 people or more than half of our population is now covered by prepayment plans. This exceeds the number of persons who would have been included in compulsory programs proposed in 1945 and 1947.

7. Governor Warren's 1945 effort was overcome with difficulty but by 1947 his program had been largely deprived of popular support and was comparatively easily defeated.

8. The California Medical Association has received numerous news and editorial comments commending its activities. It is now understood that the profession is making a real effort to solve the problem of the distribution of medical care. The fiction that our attitude is one of purely negative opposition has been destroyed.

9. We recently have learned that one organization was determined to place an initiative on the ballot in 1946. It had gone to the extent of engaging an attorney to draw up the measure and was on the verge of closing a contract for securing the necessary signatures when it was dissuaded by the knowledge that we would oppose the measure with all the force we could muster and would be adequately financed. Our preparation and determination were the deciding factors in preventing a serious and costly election campaign.

This program has succeeded in partial attainment of our objectives but the situation does not warrant smug complacence or retreat to our ivory towers.

Despite this record it has been asserted that there has been no noticable abatement in the demand for compulsory health insurance in this state. This is, of course, a matter of opinion. Such being the case, whose opinion should we value?

Should we give as much weight to that of a small group of physicians with an axe to grind as we would to the opinions of newspapermen, representatives of business, industry and agriculture, experts in the field of public relations, legislators and members of the "third house"? As far as we can ascertain, these are unanimous in the opinion that our program has been very effective and they are in a position to know.

PUBLIC RELATIONS

There are other and more fundamental bases of satisfactory public relations for the medical profession. These lie mainly in the field of the patient-physician relationship. The thesis that the physician has a dual obligation to his patient, to render to him the best professional care he is able and to deal fairly with him in an economic sense, has general acceptance.

A committee under the able chairmanship of Doctor H. Gordon MacLean has been working on this matter for the past year and will shortly report its findings. The work of this committee in conjunction with the information compiled by the Bureaus of Medical Economics should make a significant contribution.

Alertness and wise handling of matters of public interest are essential to the maintenance of good public relations in the spheres of both the State Association and the County Societies. Much harm may be done by unwise and precipitate action and much damage may be prevented by thoughtful and timely action. We recently have witnessed an example of the damaging effect upon the reputation of medicine which can result from the inept handling of a local situation without consideration of the public relations implication involved. The facilities of the California Medical Association are always available to the component county societies upon request.

We are physicians but we are also citizens. Greater exercise of the rights and the duties of citizenship by more active participation in community affairs will redound to the credit of the profession. The physician is known and respected by his neighbors. He and his county society can be extremely helpful in local matters, especially when these touch upon medical care and public health. Active interest in community problems will enhance the prestige of the individual and the profession.

The patient-physician relationship, the proper handling of matters of public interest and the demonstration of good citizenship are fundamental and important in public relations but they do not constitute a complete answer to our problems. A considerable period is required for programs directed toward these ends to produce a significant effect. This fact should not discourage us and we must develop them to the utmost.

Whether these things alone can accomplish the ends we seek is a matter for the future to determine. In the meantime we continue to face the threat of socialization. At the present time there is no substitute for vigorous, intelligent and realistic action.

THE NEED FOR UNITY

Should we then accede to the demand of a small minority of our members that we discontinue plans and procedures proven to have been effective? Should we listen to the counsel of defeat?

Should we pay heed to the false prophets of dissension and disruption in our midst? Some of these have threatened to secede from the California Medical Association if they cannot impose their will upon the Association. They have striven to divide our organization on a sectional basis.

The California Medical Association is far greater and of more importance than groups or cliques within any of its component societies. It has a broad and democratic basis of representative governing bodies. Let those who dissent from the policies of the Association present their ideas before the House of Delegates. That is the proper forum for the discussion of such issues. If they believe they have a better plan it is not only their right but also their duty so to do. If the House should decide against them, let them follow the principles of democratic behavior and the precepts of good sportsmanship and accept the will of the majority.

Let them, above all, refrain from public and written criticism and defeatist propaganda which can be used effectively against us by our enemies. Do they not see that if they commit such acts they betray the entire profession?

The paramount requirement for an effective Association is unity. California medicine has a solemn

obligation to the people of this State to preserve the high standards of medical care and to make that care available on an economic basis within the reach of the vast majority of the people. If we do this, and only if we do it, can we be reasonably secure.

As citizens we have a serious duty to aid in barring the advance of socialism. Medicine in this country has already come under attack. It has been chosen as the first victim by the planners but it is apparent that they intend to include all forms of endeavor within their scope. If one element of private enterprise falls, a breach has been made in the defenses of all and the authoritarian state is that much nearer its objectives.

I am convinced of the truth of the statement of Frederick Hayek in his book "The Road to Serfdom" when he says: "The slave state always starts out as a 'welfare state'. It promises freedom from want, worry—as many freedoms as you wish, except freedom from the state itself!"

If we do not exert every effort to prevent this from transpiring we are defaulting in our obligation as physicians and citizens. The greatest weakness we could have would be division among us. This is no time for dissension, petty quarrels or selfishness.

I therefore urge upon you the importance of the unity of the profession, of supporting and furthering the program of your Association and of standing firm against the forces which would subject you and the public to regimentation with serious injury to both.

A unified profession determined to resist socialization cannot be enslaved. But in the words of Abraham Lincoln, "A house divided against itself cannot stand."

Hypersensitivity, the Common Denominator of the Collagenous Diseases

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RECENT advances in the treatment of the simple allergies plus the revival of interest in rheumatic fever calls attention to a group of related diseases, cousins, one might say, of the common allergic entities.

Rheumatic fever, periarteritis nodosa, disseminated lupus erythematosis, dermatomyositis, serum sickness, various drug allergies, and possibly regional enteritis are all well known clinical entities. The variations in the individual clinical and general pathological patterns permit differentiation of a goodly number of these diseases. There remain, however, those intermediate cases which the pathologist is hard put to file into a diagnostic pigeon hole. They possess in common one fundamental histopathological lesion, degenerative and fibrinoid alteration of collagen, the intercellular substance which lends strength to connective tissue and forms an important constituent of blood vessel walls. Vascular lesions play the leading role in the pathological features of this group so the term "visceral angiitis" has been used. The different organ distribution of the vascular lesions, the relative degree of involvement of the serosal and endocardial surfaces and the interstitial tissue, the degree of collagenous changes, and the cellular response of the organism set the pattern for that particular disease.

Banks[2] pointed out the striking similarity in the microscopic lesions of disseminated lupus erythematosis, dermatomyositis, scleroderma, and periarteritis nodosa. The differentiation among them is dependent upon the dominant individual focal lesions, age, sex predilection, and the course of the disease. Fox[6] feels that disseminated lupus erythematosis is an allergic disease while Rich in numerous publications points out the allergic basis for rheumatic fever and periarteritis as well as serum sickness.

Let us examine the evidence for a common mechanism of evolution for the entire group, namely: antigen-antibody reaction in the tissue cells of a hypersensitive organism.

Anaphylaxis, the Arthus phenomenon, and serum sickness are different patterns of the allergic state. The type of reaction will depend upon the antigen, the dose, frequency of the dosage, the route of entry, and the individual sensitivity. The individual sensitive to horse serum will react to intracutaneous administration of the serum with a violent wheal while if enough serum were to be given intravenously, he would likely die in anaphylaxis. The hypersensitive state is not a protective mechanism related to immunity.

The injection of a heterologous serum, horse antitetanus serum for example, into a human stimulates the formation of antibodies against fractions of the horse serum, probably the globulin. If the rise in anti-horse antibodies is rapid enough, a significant titre will be reached before the horse antigens have disappeared. The reaction of antigen with antibody produces serum sickness, the individual symptoms depending upon which group of body cells the antibodies have become fixed.

Clark and Kaplan[3] report two deaths following large doses of anti-pneumococcus serum. Pathologically there was proliferation of histiocytes in the valvular and mural endocardium, the intima of the aorta and pulmonary artery, and the interstitial tissue of the heart, liver, kidneys, and adrenals. Collagen fragmentation and periarterial cellular proliferation were seen in the more severe lesions.

Similar collagenous lesions were seen in the two children reported by Werne and Garrow[23] who died in anaphylaxis following a second dose of diphtheria toxoid.

The rabbit equivalent of serum sickness may be produced by a single large dose of heterologous serum. The rabbits become ill, febrile, and there is flushing of the ears.

In the study of living vessels in the rabbit ear, Abel and Sheck[1] found arteriolar constriction and migration of leukocytes through the capillary walls. Repeated doses of antigen produced focal endothelial destruction.

Rich[17] reports seven fatal pneumonia cases, in five of which the patient received both serum and a sulfonamide; in one, serum alone; and in one a sulfonamide alone. Six had symptoms of serum sickness before death. In each of these patients there was found at postmortem the typical early lesions of periarteritis nodosa, namely: necrosis, fibrinoid, and hyalin alteration of the collagen in the media of arteries, mononuclear and polymorphonuclear infiltration of the vessel walls and perivascular areas, and in four cases infiltration with eosinophils. Rich later reported another case[18] in which a skin biopsy before sulfonamide therapy demonstrated normal vessels but the postmortem examination revealed typical vascular lesions. Comparable lesions following sulfonamides have been reported by Merkel and Crawford[13] and Lederer and Rosenblatt.[10] The similarity of rheumatic pneumonitis and the allergic pneumonitis due to the sulfonamides has been pointed out by Rich and Gregory.[19]

According to McCall,[12] in periarteritis nodosa the fibrinoid degeneration of the media and the subendothelial cellular proliferation may involve any or all grades of blood vessels. Later manifestations are periarterial granulomas and aneurysms. All organs may be involved. The classical case with abdominal, pulmonary, cardiac, renal, muscular, and skin symptoms and signs offers little diagnostic difficulty.

Bronchial asthma is a typical allergic disease. It may run a fairly benign course for decades, yet the asthmatic always treads a perilous path. Rackemann[15] stresses the relationship of asthma to periarteritis and points out the unfavorable prognostic sign of a rising eosinophile count, especially if associated with multiple areas of pneumonitis. These signs may anticipate a full-blown periarteritis nodosa. The Loeffler syndrome is therefore not always benign.

Harkavy[8] presents the records of four autopsied cases of asthma in which were present not only the typical bronchial lesions but also lesions of the blood vessels, myocardium, serous membranes, joints, skin, nervous, and hematopoietic systems. The pulmonary arterial tree showed a hyperergic reaction varying in severity from mere thickening of the media to an acute necrotizing arteritis. Similar vascular lesions were present in the heart, intestines, and other organs. The serous membrane involvement was thought to be secondary to the vascular lesions. The postmortem findings in these cases are typical of periarteritis nodosa and represent varying degrees of the allergic vascular reaction to polyvalent antigenic sensitivity.

Rich and Gregory,[20] in a brilliant series of experiments, sensitized rabbits to horse serum and then gave them repeated sublethal shocking doses. Typical lesions of periarteritis nodosa in all stages were produced: (1) edema of the endothelium and media, (2) necrosis, fibrinoid alteration, and hyalinization of the collagen of the media, and (3) marked perivascular infiltration. Diffuse glomerulonephritis was also present in some of the animals. The lesions could also be produced by a single large dose of serum. Rich's work lends additional evidence of the close relationship of serum sickness, bronchial asthma, and periarteritis nodosa.

Rheumatic fever probably causes more disability in the child and young adult than any other disease. It is of far greater importance than poliomyelitis as the cardiac cripple is more common and more handicapped than the muscular cripple. A comparison of the amount of money available for the study of these two diseases indicates a great popular lack of understanding of the facts involved.

Rantz[16] recapitulates the evidence implicating the beta hemolytic streptococcus or its products as the responsible antigen: (1) absence of rheumatic fever in the very young, (2) concomitant rise in incidence of rheumatic fever and streptococcus infections, (3) the appearance or exacerbation of the disease following a streptococcus infection, (4) high titre of anti-streptococcus lysin in the disease, and (5) cutaneous sensitivity to the streptococcus. Much credit is due Swift[22] who 16 years ago came to a similar conclusion.

Rich and Gregory[21] review the cardiac lesions generally accepted as characteristic, namely: (1) focal alteration of the collagen, (2) the Aschoff body, (3) focal and diffuse cellular infiltrations, (4) focal alterations in the cardiac muscle, and (5) valvular verrucae. The valvulitis, polyserositis, arthritis, pneumonitis, peritonitis, and erythema nodosum and marginatum are organ manifestations of the vasculitis. The authors were able to duplicate in rabbits sensitized to horse serum all these lesions, even to the Aschoff nodule, hithertofore considered to be pathognomonic of rheumatic fever.

Hall of the University of Southern California School of Medicine had produced comparable results with rabbits. No report of this work has been published. Recently Moore[14] of the same school has produced similar lesions in white mice, but using egg albumin as the antigen. Minor focal perivascular lesions have been found in the control group. This finding is of great importance, suggesting that the mouse and probably man is subjected to a host of antigens from the time he leaves the womb until he retires to the tomb. These leave their mark but the reaction is usually so slight as to cause no symptoms.

The vascular lesions of rheumatic fever and periarteritis nodosa differ in degree and distribution. In the rabbit both lesions are present.

A consideration of disseminated lupus erythema-

tosis recalls the report by Libman and Sacks [11] in 1924 in which they described what they thought to be a new clinical entity in four cases of verrucous endocarditis which was neither bacterial nor rheumatic. In retrospect, these four cases are really disseminated lupus erythematosis, an entity which had previously been described.

Coburn and Moore [4] in a study of 30 cases decide it to be predominantly a disease of young females with an onset in summer and early fall and fatal within three to eighteen months. Clinically, one sees polyserositis, arthritis, pneumonitis, renal disease, lymphadenopathy, splenomegaly, and skin lesions. If one finds the characteristic skin lesions with associated white centered petechiae, and finger tip hemorrhagic lesions, the diagnosis is simple. Many cases, on the other hand, cannot be differentiated from rheumatic fever or periarteritis nodosa.

Gross [7] and later Klemperer [9] have written detailed descriptions of the pathologic changes. The lesions resemble those of rheumatic fever and periarteritis nodosa with minor variation. Generally the collagen alteration is more marked but the cellular infiltration and reparative processes less marked than in rheumatic fever. The involvement of the interstitial tissue is more marked than in periarteritis nodosa. The most characteristic lesion, if present, is the "wire-looping" in the kidneys produced by the deposition of an unknown substance between the glomerular epithelium and capillary. Chemically, one finds an increase in the gamma globulin, that fraction of the plasma protein which is said to contain the antibodies.

These people are unusually photosensitive and acute exacerbations following sunburn have been recorded. It is thus linked to acute porphyria. Fox [6] reports a case of serum sickness which merged into disseminated lupus erythematosis.

Dermatomyositis is similar except that the course is longer and the somatic rather than the splanchnic structures are apt to be involved.

Lesions in the bowel similar to regional enteritis have been reported in periarteritis nodosa and in experimental animals shocked by foreign proteins.

SUMMARY

The diseases discussed have as the fundamental lesion collagen alteration. They are as truly manifestations of the allergic state as is asthma. The human is increasingly exposed to a host of potential antigens as soon as he is born, yet only a few develop sensitivity that results in allergic disease. Probably the single most important factor in predisposing to the allergic state is the inherent constitution of the individual. The allergy is single at first but becomes polyvalent with the passage of time.

The physician must bear in mind that many drugs, sera, and vaccines are potential antigens. Sensitization to the sulfonamides is common knowledge. One should remember that about 5 per cent of patients will have allergic reactions to penicillin, some of grave severity. Penicillin inhalations in asthmatics may make the disease more severe by adding another antigen. Penicillin in oil and wax appears to produce a higher percentage of allergic reactions than penicillin in saline.

Heterologous serum is always potentially dangerous and should be used only on definite indication. Cold vaccines in the hypersensitive individual may give trouble. Influenza vaccine contains minute traces of egg antigen and will produce severe reactions in individuals sensitive to egg. Probably it should be used only when an epidemic threatens.

Enthusiasm for massive salicylate therapy in acute rheumatic fever has waxed and waned. Coburn [5] revived interest in it in 1943. His belief that salicylates will prevent cardiac complications and reduce the occurrence of the polycyclic form is not generally shared.

The antihistamine drugs are generally effective in serum sickness and may have some promise in the other diseases.

Desensitization is rarely effective, as the sensitivity is usually polyvalent.

CONCLUSION

1. Serum sickness, periarteritis nodosa, rheumatic fever, disseminated lupus erythematosis, dermatomyositis, and perhaps regional enteritis have the common denominator of sensitivity.

2. Human lesions of collagen necrosis, fibrinoid alteration, and hyalinization, the fundamental pathological lesion in these diseases may be reproduced in animals.

3. Present therapy is not effective once angiitis is established.

REFERENCES

1. Abell, R. G., and Schenck, H. P.: Microscopic observation of the behavior of living blood vessels of the rabbit during the reaction of anaphylaxis, J. Immun., 34:195 (March), 1938.

2. Banks, B. M.: Is there a common denominator in scleroderma, dermatomyositis, disseminated lupus erythematosis, the Libman-Sacks syndrome, and polyarteritis nodosa?, N. En. J. Med., 225:433 (Sept. 18), 1941.

3. Clark, E., and Kaplan, S. I.: Endocardial, arterial, and other mesenchymal alterations associated with serum disease in man, Arch. Path., 24:458 (Oct.), 1937.

4. Coburn, A. F., and Moore, D. H.: The plasma proteins in disseminated lupus erythematosis, Bull. J. Hop. Hosp., 73:196 (Sept.), 1943.

5. Coburn, A. F.: Salicylate therapy in rheumatic fever, Bull. J. Hop. Hosp., 73:435, 1943.

6. Fox, R. A.: Disseminated lupus erythematosis—An allergic disease?, Arch. Path., 36:311 (Sept.), 1945.

7. Gross, L.: The cardiac lesions in Libman-Sacks disease, Am. J. Path., 16:375 (July), 1940.

8. Harkavy, J.: Vascular allergy III, J. Aller., 14:507 (Nov.), 1943.

9. Klemperer, P., Pollack, A. D., and Baehr, G.: Pathology of disseminated lupus erythematosis, Arch. Path., 32:458 (Oct.), 1941.

10. Lederer, M., and Rosenblatt, P.: Death due to sulfathiazole therapy, J.A.M.A., 119:8 (May 2), 1942.

11. Libman, E., and Sacks, B.: A hitherto undescribed form of valvular and mural endocarditis, Arch. Int. Med., 33:701 (June), 1924.

12. McCall, M.: Periarteritis nodosa: Our present knowledge of the disease, Ann. Int. Med., 21:628 (Oct.), 1944.

13. Merkel, W. C., and Crawford, R. C.: Pathological lesions produced by sulfathiazole, J.A.M.A., 119:770 (July 4), 1942.

14. Moore, F.: Paper presented before the Am. Fed. of Cl. Res., 1947.

15. Rackemann, F. M.: Progress in internal medicine, Allergy, Arch. Int. Med., 58:108 (July), 1946.

16. Rantz, L. A., Boisvert, P. J., and Spink, W. W.: Etiology of rheumatic fever, Arch. Int. Med., 76:131 (Sept.), 1945.

17. Rich, A.R.: The role of hypersensitivity in periarteritis nodosa as indicated by seven cases developing during serum sickness and sulfonamide therapy, Bull. J. Hop. Hosp., 71:123, 1942.

18. Rich, A. R.: Additional evidence of role of hypersensitivity in etiology of periarteritis nodosa, Bull. J. Hop. Hosp., 71:375, 1942.

19. Rich, A. R., and Gregory, J. E.: The anaphylactic nature of rheumatic pneumonitis, Bull. J. Hop. Hosp., 73:465, 1943.

20. Rich, A. R., and Gregory, J. E.: The experimental demonstration that periarteritis nodosa is a manifestation of hypersensitivity, Bull. J. Hop. Hosp., 72:65 (Feb.), 1943.

21. Rich, A. R., and Gregory, J. E.: Experimental evidence that lesions with the basic characteristics of rheumatic carditis can result from anaphylactic hypersensitivity, Bull. J. Hop. Hosp., 73:239 (Oct.), 1943.

22. Swift, H. F.: Rheumatic fever, J.A.M.A., 92:2071 (June 22), 1929.

23. Werne, J., and Garrow, I.: Fatal anaphylactic shock, J.A.M.A., 131:730 (June 29), 1946.

The Early Diagnosis and Radical Treatment of Prostatic Carcinoma

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INTRODUCTION

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Of all malignancies in men of all ages, cancer of the prostate is seventh in frequency, cancer of the stomach being first. But in men over 50 it is first, and with the rising expectancy of life span, it presents a problem of increasing magnitude.

Cancer is a leading cause of death in this country, and the only certain cure has been early diagnosis and radical removal. This principle, universal for other cancers such as of the breast, the stomach and the rectum, has been restricted in its application to the cure of cancer of the prostate. The reasons for this may be the uncertainty and rarity of early diagnosis, the suspected formidability of radical operation and the recent palliative promise of estrogens. The urologic staff of the University of California has practiced the radical principle of treatment for over 30 years now. The author of the following paper has reviewed the records of both private and clinic patients of all members of resident and attending staffs of this period from four different hospitals, and the analysis he gives is based on these records uninfluenced by memory or impression. The points at issue: How many patients will be cured by early diagnosis and radical surgery? What are the risks at operation and afterward? Does this surgical principle (widely applied elsewhere) apply to cancer of the prostate?

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Read before the section on Urology at the Annual Session of the California Medical Association, April 30-May 3, 1947, Los Angeles.

THERE are still urologists who find no place for radical prostatectomy in the treatment of prostatic carcinoma, saying that it is incurable if it has reached a stage at which it can be suspected before operation and that consequently the only way to treat it is by palliation with resection and hormones. The confounding thing in their point of view is that they are 95 per cent right, for even today about 95 per cent of all cases of prostatic cancer are seen when the cells have spread beyond the capsule and so cannot be excised with hope of cure. We can show, however, in our analysis of early cases that the remaining 5 per cent should not be set aside as hopeless but should be treated by radical surgical operation with a good chance for cure.

We have analyzed all the cases diagnosed as "early" by rectal palpation by the staff of the Division of Urology, University of California, in the last 20 years. The total is 45 cases. In eight of these cases the cancer was found to have spread beyond the capsule at operation. However, these cases are included in the analysis. Three other cases were not included because of inadequate operative or follow-up information. For comparison, we have reviewed recently published reports of series of unmetastasized carcinoma.

Prostatic carcinoma differs from cancer of most other organs in two important ways. It originates in a part of the body fairly inaccessible to usual radical surgical methods for too many important structures lie against the prostate to permit excision of the tumor with a good margin. It differs also in that it grows slowly and is silent until it has spread too

far to be removed by any operation. Basically, it is because of these peculiarities that all the disagreement about the proper course of treatment exists; otherwise, radical surgery would be accepted as a matter of course. Consequently, we must evaluate four possibly adverse factors which are raised as arguments against radical surgery: the difficulty of early diagnosis; the high operative mortality; the unhappy postoperative sequelae, especially incontinence; and, finally, the remote chance of cure.

Early Diagnosis: This is the base upon which all chance of cure rests. Carcinoma of the prostate gives no symptoms until very late, so that signs must be used for early diagnosis. The only reliable sign is stony hardness on rectal palpation. We constantly urge routine rectal examinations.

We know that the finger is a poor instrument for finding even presumptive evidence of the lesion. Baron and Angrist (1941), studying clinically undiagnosed lesions, could feel the carcinoma in the excised postmortem specimen only once in 50 cases. Moore (1935) felt the tumor in only ten of 58 autopsy specimens. And the literature is spotted with series of very early carcinoma undiagnosed clinically and discovered only after microscopic study (Albarran and Halle, 1900; Shaw, 1924; Neller and Neubürger, 1926; Hirsch and Schmidt, 1928; Bugbee, 1929; Muir, 1934; Rich, 1935; Myers, 1937; Gaynor, 1938; Kahler, 1939).

In the last ten years, we have seen 43 cases which were not diagnosed before operation. The reasons were that the tumor was too small, or medullary, or not in the posterior portion of the gland near the examining finger. The first of these conditions is not insurmountable; the small cancer may grow very slowly and will not spread outside the capsule until late. Before such extension, it may be felt rectally. In a study of 36 occult carcinomas, Baron (1941) reached the conclusion that "the probability is that they exist for many years, without causing symptoms and without metastases." No other explanation is possible for the discrepancy between the facts that from 14 per cent (Rich, 1935) to 29.4 per cent (Myers, 1937) of men over 50 years of age dying from all causes have carcinoma of the prostate, yet only 6 per cent (Griswold, 1946) die of that carcinoma. Medullary tumors are difficult to diagnose rectally, but fortunately they are relatively uncommon. Lastly, the tumor may be in a portion of the gland which cannot be reached by palpation. Since Shaw's paper (1924), there have been many American reports of small tumors arising in areas of benign hyperplasia (the French have long championed this site of origin), although much less frequently than in true prostatic tissue. The Spanish writer, Vernet (1944), among others, on the contrary believes that hyperplasia is never a focus.

In our collection of 43 cases of carcinoma unsuspected before operation, about half occurred principally in areas of benign hyperplasia but the exact locus could not be determined. Kahler (1939), in a careful study, found more occult carcinoma in the median, anterior and lateral "lobes" together than in the posterior. In fact, he concludes, "The distribution of the localized tumors in the other lobes would seem to be roughly proportional to the area of those lobes as represented in a cross section of the gland." He does not conform to the usual, and probably erroneous, division of five lobes; his posterior "lobe" is more or less that portion which can be felt through the rectal mucosa. Moore (1935) found 23.6 per cent in the anterior and lateral lobes, and Gaynor (1938) noted 39.4 per cent. Both concluded that carcinoma in the anterior portion was less malignant than elsewhere. The important fact is that carcinoma of the lateral and posterior portions spreads cephalocaudad beneath the capsule (Moore, 1935) so that almost no matter what part of the gland is first involved, the posterior portion is involved before the capsule is breached (especially since it is covered posteriorly by the avascular fascia of Denonvillier). It is for this reason that most of the early authors in America, of which Geraghty (1922) is the best known, believed that all cancer of the prostate originated in the so-called posterior lobe; they merely saw a later stage in the surgical specimen than Kahler and the others have noted in autopsy material.

This discussion would be incomplete without mention of the much publicized early involvement of the perineural lymphatics relative to the possibility of complete excision. Carcinoma cells invade these vessels early; their presence is one of the most reliable criteria for diagnosis (Kahler, 1939). The widely accepted syllogism that (a) prostatic carcinoma infiltrates the perineural lymphatics early, and (b) that lymphatic invasion means metastasis, hence (c) prostatic carcinoma metastasizes early, is based on faulty reasoning. The fallacy is in the fact that the true prostatic capsule limits metastasis along the perineural lymphatics until late. Moore (1935) in his study of 375 cases stated, "Perineural lymphatic invasion in the capsule of the prostate is one of the earliest changes in carcinoma but invasion of the vesicles and distant lymphatic invasion is a late manifestation." The radical prostatectomy is based upon this fact, for there is no opportunity at operation to dissect out the secondary lymph zones. Besides, Warren, Harris and Graves (1936) have demonstrated direct lymphatic pathways to bone. Similarly, venous invasion and spread is a late occurrence (Batson, 1940).

We describe the technique of rectal examination because of its prime importance in diagnosis. Only with the patient standing in extreme flexion or kneeling in the knee-chest position is the stony hard nodule presented to the examining finger in a characteristic manner. Biopsy, for confirmation in early lesions, is done only perineally with preparation for frozen section and radical excision. Needle biopsies are felt to be worthless or misleading if negative; even if positive, they indicate an early lesion and hence radical perineal surgery. In 50 cases in which early carcinoma was diagnosed by rectal examination, the evidence was sufficiently doubtful in 27 (54 per cent) to warrant biopsy (Chart 1). Eighteen

of the biopsy examinations were positive, eight were negative and one was equivocal. Of the eight negative biopsies, four were characteristic enough on direct examination of the exposed prostate to warrant the radical procedure; in three of the four, this diagnosis was proved correct. In two other cases, biopsies were not done and the radical operation was carried out under the erroneous impression that the lesion was carcinoma. Acid phosphatase determinations, cystoscopy and roentgenograms were used only to rule out late carcinoma.

CHART 1.—*Perineal Biopsies*

	Cases	Per cent
Rectal suspicion of carcinoma	50	
Biopsies	27	54
Positive	18	36
Negative*	8	16
Equivocal	1	2
No biopsy†	23	46

* Radical prostatectomy in four cases with negative biopsies, three contained carcinoma.
† Two additional patients, without biopsy, had the radical operation unnecessarily.

We see, therefore, that all depends on early diagnosis by palpation of stony hardness. This is difficult if the lesions are of small size, unusual softness, or relative inaccessibility to the finger. These difficulties are not found in all cases, so we must work toward increasing the relatively few—4.5 per cent (Barringer, 1935) to 20.2 per cent (Colston, 1945)—that are seen while still limited by the capsule.

Operative Mortality: The second argument raised against radical treatment is the high operative mortality. The published reports vary from 4 per cent (Belt, 1942) to 12.1 per cent (Yllyés, 1935). In the present series of 45 cases, six patients died within two months of operation, for the unusually high rate of 13.3 per cent; but there have been no deaths in the last 20 cases. This rate is prohibitive only if it is shown that the operation is too seldom curative, for we are dealing here with lethal cancer. A corollary to this objection is that the life expectancy in any event is too short to warrant radical surgical removal. The average age of our patients at the time of operation was 67.5 years. Their computed life expectancy was ten and one-half years. Certainly this is time enough to warrant attempting a cure. The additional fact that these patients have a recurrence, if any, in areas remote from the vesical neck means that the operation assures greater comfort for their remaining years even if cure is not obtained. In general surgery the trend has been toward removing the primary tumor even in the presence of metastases to allow increase of general well-being and permit death from metastasis unaccompanied by the distressing symptoms of local growth (Brunschwig, 1947). Urologists also have commented on the freedom from local recurrence following "partial radical" prostatectomy (Smith, 1941; Colston, 1945). We have not included 19 five-year survival cases in which radical perineal prostatectomy was done although the preoperative diagnosis was late carcinoma. Of these, 10.5 per cent had recurrence of obstruction, but 35.3 per cent lived five years. All but three died of carcinoma (Chart 2).

CHART 2.—*Analysis of 5-Year Series, Radical Prostatectomy, Late Carcinoma*

Total number of cases		19	
Minus operative deaths		17	
Alive 5 years		6	35.3%
Without carcinoma	2		
With carcinoma	4		
Dead in 5 years		11	64.7%
Without carcinoma	1		
With carcinoma	10		
Recurrence of obstruction		2	(10.5%)

It has been interesting to observe in this connection that there have been no cases of recurrence of carcinoma in the operative scar. This was underlined particularly in one case in which, a week after a negative report was given on the frozen section biopsy, the permanent sections were read as containing carcinoma. Consequently, the perineal incision was reentered and radical prostatectomy done. The patient was alive without evidence of recurrence seven years later.

Incontinence: This is the third factor against a more general use of radical surgery. In the present series, only five patients (11 per cent) had enough leakage to wear a clamp or bag; the same number had some stress incontinence and usually wore a pad when out of bed (Chart 3). One patient had a rectourethral fistula. Other postoperative complications have been obstruction secondary to improper repair

CHART 3.—*Postoperative Complications*

Number of cases	45	
Partial or total incontinence	5	11.0%
Stress incontinence	5	11.0%
Postoperative obstruction	2	4.4%

of the vesical neck (two cases, 4.4 per cent), necessitating transurethral resection one and two years after operation, and pain secondary to metastasis in patients with progressive carcinoma. Impotence is not an invariable accompaniment of total prostatectomy (erection without ejaculation occurs in some patients); however, since it accompanies hormonal treatment as well, it does not enter the present discussion.

Curability: The last and most important factor which determines whether or not radical prostatectomy is the treatment of choice is the proportion of cures as compared with the cures attained by any other regimen. After the introduction of hormonal therapy, there was much loose thinking about the cure of prostatic carcinoma by this means alone. This is now seen to have been false optimism. All castrate and estrogen-treated series to date show a steadily progressive increase in death rate. That the radical procedure is curative has been shown before. Colston's series, reported in 1945, showed the best results with 48.2 per cent five-year cures (excluding operative deaths from the calculation). In the present

series, we have 23 patients who were operated upon five or more years ago; of these, 56.5 per cent lived five years or longer (Chart 4). One patient is alive after 17 years. In 68.7 per cent there was no evidence of recurrence.

CHART 4.—*Analysis of 5-Year Series, Radical Prostatectomy, Early Carcinoma*

Total number of cases		28
Minus operative deaths		23
Alive 5 years		13 (56.5%)
Still alive without carcinoma	9	
Still alive with carcinoma	0	
Dead without carcinoma	2	
Dead with carcinoma	2	
Dead in 5 years		10 (43.5%)
Dead without carcinoma	3	
Dead with carcinoma	7	
Average survival (series unclosed)		5¼ years
Maximum survival (1 case)		17 years
Average age		67.5 years

To analyze further the five-year cures, we have compared the deaths in three groups; our five-year series of radical perineal prostatectomies, Vest and Frazier's (1946) so-called 1930 series of 74 cases of untreated carcinoma, and Nesbit and Plumb's (1946) series of 273 cases of unmetastasized carcinoma. It is seen from Chart 5 that the radical operation attained 56.5 per cent five-year cures compared with 10 per cent in the untreated series of Nesbit and 6 per cent in that of Vest. These last figures agree with those of Griswold (1946) that 7 per cent (38 of 544 hospital cases) survived five years with untreated prostatic carcinoma. The series of Vest and Nesbit were chosen for comparison because their method of recording their statistics is similar to ours; Bumpus' (1926) series, on the other hand, is not comparable, since it is calculated from the date of onset of symptoms rather than the date of consultation or treatment. Our own untreated cases have been seen mainly in the out-patient department, and available data is not sufficient to permit using them for comparison.

The use of the word "cure," even following radical prostatectomy, is not above criticism, for every urologist knows of at least one patient with known but untreated carcinoma who has lived eight or more years after diagnosis. For this reason, and for the additional one that our material is not sufficiently mature, we limit our discussion to five-year cures, since at five years 90 to 94 per cent of untreated patients are dead. The indications are that almost as high percentage of those treated hormonally will also die within that period (Nesbit, 1946). When deaths from radical perineal prostatectomy are compared year by year with those of an untreated series (Chart 6), it is seen that radical treatment gives approximately a 50 per cent lower curve, indicative of about twice as many patients alive at any time. In addition, the tendency toward flattening of the

CHART 6

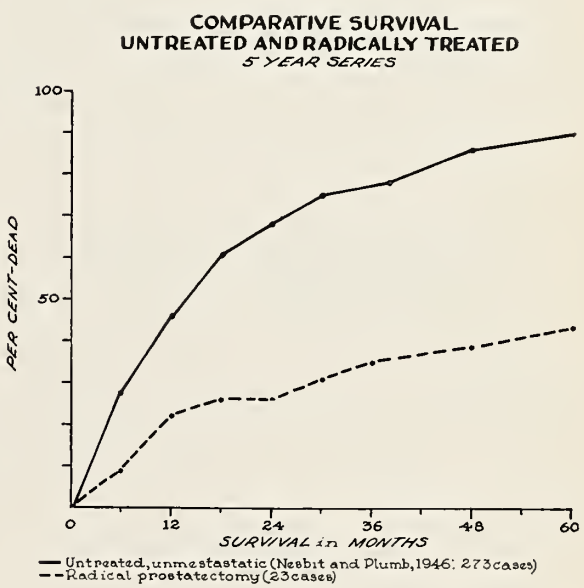
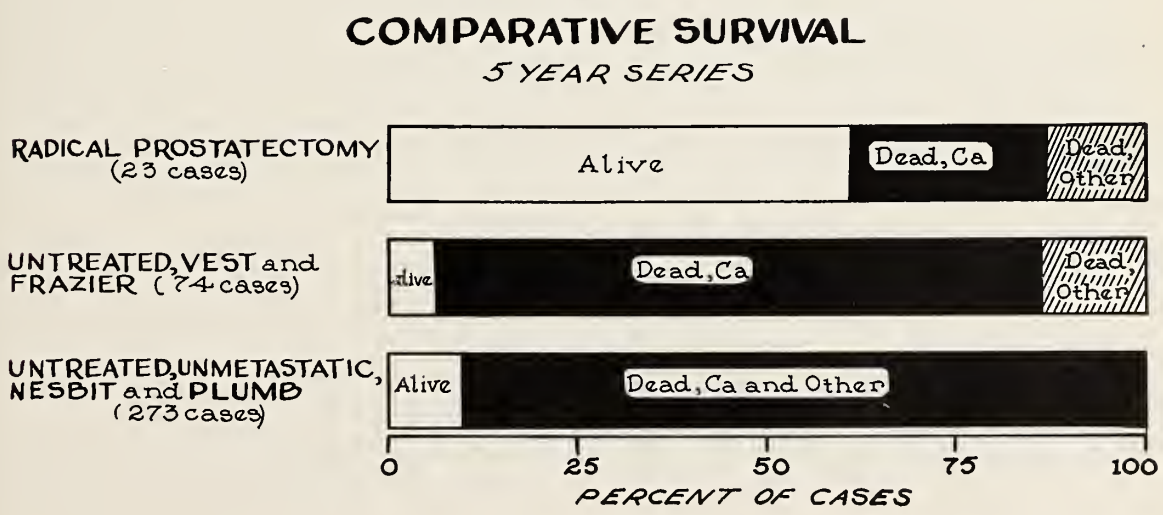


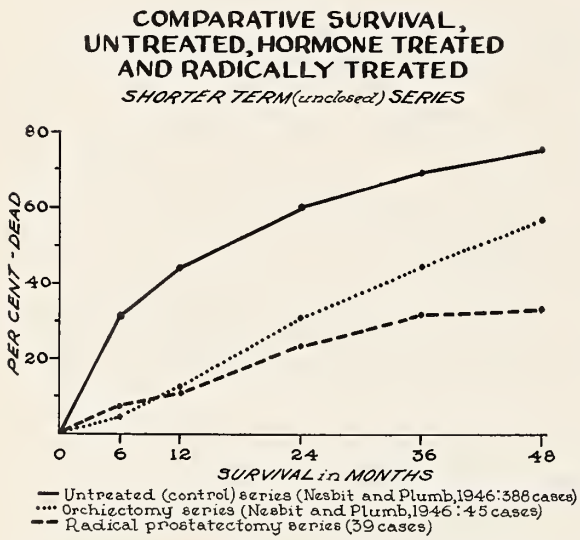
CHART 5



curve as time passes may indicate that those in whom all the carcinoma had not been removed die early and later deaths will follow the expected rate for the population in general. This of course cannot be proved by so small a series. At any rate, 84.6 per cent of these cases showed no evidence of recurrence.

A second worthwhile comparison is with larger series of patients with unmetastasized carcinoma necessarily followed for shorter periods of time, some treated by orchiectomy (Nesbit and Plumb, 1946, 45 cases) and some given no treatment (Nesbit and Plumb, 1946, 388 cases). The time since the introduction of hormone therapy is too short to allow comparison of a five-year series. The consensus of opinion from the published reports is, however, that the greatest benefit occurs in the first year or two and that there will probably be no long term "cures." On Chart 7 again we find the low curve of longer survival of those treated by radical surgery. In the radically treated cases, even when compared with the curve of the orchiectomy series, there is about a 25 per cent lower death rate. The patients in whom all the tumor was removed would not stand out in a two or four-year survey, but would give evidence of cure only when followed for longer periods.

Chart 7



In a few words, comparison of survival at any period shows the superiority of radical excision over palliative treatment. Even the addition of the worst figures of 13.3 per cent mortality plus 11 per cent morbidity to any but the early periods does not tip the balance away from the radical operation.

SUMMARY

1. An analysis is presented of the 45 cases of early carcinoma of the prostate diagnosed by rectal palpation and treated by radical perineal prostatoseminal vesiculectomy in the last 20 years by members of the University of California Hospital staff.

2. Four factors have been advanced as arguments against the value of the radical operation. We feel that these are answered by the results of the analysis.

(a) The difficulty of early diagnosis: It is admitted that early diagnosis may be difficult or impossible, but the one means of obtaining it, rectal palpation, must be exploited to the fullest extent by routine examinations and perineal biopsy of all suspicious lesions.

(b) Prohibitive operative mortality: The average mortality rate for published series is between 5 and 6 per cent. In the present series, 13.3 per cent died within two months of operation, but there were no deaths in the last 20 cases. These rates are felt to be within reason when compared to the rate of cure.

(c) High incidence of incontinence: Incontinence occurred in 11 per cent of the cases. This likewise is considered a small price for the high rate of cure.

(d) Low rate of cure: Of 23 cases followed five years or more, 56.5 per cent lived five years. Nine are still alive without evidence of carcinoma and five died without evidence of recurrence (68.7 per cent). These figures are compared with large series of unmetastasized untreated cases in which only 6 to 10 per cent survived five years. The rate of cure for open series of shorter duration likewise is twice as high as for untreated cases and only slightly less than twice as high as a castrate series.

3. Radical perineal prostatectomy is the indicated procedure, therefore, in the approximately 5 per cent of patients with carcinoma of the prostate who are examined early while the lesion is still limited by the capsule. Every effort must be made to increase the number of patients in this group and to give them radical surgery, since it is the only treatment that is curative.

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REFERENCES

Albarran, J., and Halle, N.: Hypertrophie et Néoplasies epitheliales de la prostate, Ann. des Mals. des Org., G.U., 17:225, 1900.

Baron, E., and Angrist, A.: Incidence of occult adenocarcinoma of the prostate after 50 years of age, Arch. Path., 32:787-793 (Nov.), 1941.

Barringer, B. S.: Prostate carcinoma, J. Urol., 33:616-620 (June), 1935.

Batson, O. V.: The function of the vertebral veins and their role in the spread of metastases, Ann. Surg., 112:138-149 (July), 1940.

Belt, E.: Radical perineal prostatectomy in early carcinoma of the prostate, J. Urol., 48:287-297 (Sept.). 1942.

Brunschwig, A.: Radical surgery in advanced abdominal cancer, Univ. of Chicago Press, 1947.

Bugbee, H. G.: Cases of unsuspected carcinoma of the prostate discovered on microscopic section, J. Urol., 22:363-376 (Oct.), 1929.

Bumpus, Jr., H. C.: Carcinoma of the prostate. A clinical study of 1,000 cases, Surg., Gynec. & Obst., 43:150-155 (Aug.), 1926.

Colston, J. A. C.: Surgical removal of cancer of the prostate gland. The radical operation, J.A.M.A., 127:69-74 (Jan. 13), 1945.

Gaynor, E. P.: Zur frage des Prostatakrebses, Virch. Arch. f. path. Anat., 301:602-652, 1938.

Geraghty, J. T.: Treatment of malignant disease of prostate and bladder, J. Urol., 7:33-65 (Jan.), 1922.

Griswold, M. H.: Cancer of the prostate in Connecticut, Conn. M. J., 10:106-109 (Feb.), 1946.

Hirsch, E. F., and Schmidt, L. E.: Small carcinoma of the prostate gland, J. Urol., 20:387-405 (Oct.), 1928.

Kahler, J. E.: Carcinoma of the prostate gland; pathologic study, J. Urol., 41:557-574 (April), 1939.

Moore, R. A.: The morphology of small prostatic carcinoma, J. Urol., 33:224 (March), 1935.

Muir, E. G.: Carcinoma of the prostate, Lancet, 1:667-672 (Mar. 31), 1934.

Myers, G. M.: The occurrence of carcinoma in clinically benign prostatic obstructions, Colorado Med., 34:248 (April), 1937.

Neller, K., and Neubürger, K.: Ueber atypische Epithelwucherungen und beginnende Karzinome in der senilen Prostata, München. med. Wchnschr., 73:57-59 (Jan.), 1926.

Nesbit, R. M., and Plumb, R. T.: Prostatic carcinoma; a follow-up on 795 patients treated prior to the endocrine era and a comparison of survival rates between these and patients treated by endocrine therapy, Surg., 20:263-272 (Aug.), 1946.

Rich, A. R.: On the frequency of occurrence of occult carcinoma of the prostate, J. Urol., 33:215 (March), 1935.

Shaw, E. C.: An early case of carcinoma of the prostate associated with benign hypertrophy, J. Urol., 11:63-73 (Jan.), 1924.

Smith, G. G.: Total perineal prostatectomy, Penn. M. J., 44:1391-1399 (Aug.), 1941.

Vernet, S. G.: Patologia Urogenital, Tomo 1, Cancer de Prostata, 1944, Servet, Barcelona.

Vest, S. A., and Frazier, T. H.: Survival following castration for prostatic cancer, J. Urol., 56:97 (July), 1946.

Warren, S., Harris, P. N., and Graves, R. C.: Osseous metastasis of carcinoma of the prostate with special reference to the perineural lymphatics, Arch. Path., 22:139-160 (Aug.), 1936.

Yllyés, G. v.: Erfahrungsergebnisse bei Nieren-, Blasen- und Prostatakrebs, Ztschr. f. urol. Chir., 41:123-132, 1935.

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Discussion by A. J. Scholl, M.D., *Los Angeles*

We all agree with Dr. Hinman that the proper treatment for carcinoma of the prostate in the early stages is radical removal. Carcinoma of the prostate is rarely found in what might be called the early stage, although every malignant tumor in the prostate passes through that stage. The point is to educate, not necessarily the urologist, but the general doctor to be on the alert for such cases. The public should know the need for periodic examination.

It is unfortunate that the diagnosis, even more so than the diagnosis of tumor of the bladder, is usually not made until the disease is far advanced.

In Barringer's series of cases of carcinoma of the prostate, 24 months had elapsed between the onset of symptoms and the establishment of the diagnosis. In only 4.5 per cent of his cases were the tumors reasonably small and confined to the prostate gland and periprostatic region. Creevy found 10 of 500 cases suitable for a radical procedure. In 95 per cent of Thompson's cases the growth was spread beyond the confines of the prostate when first seen. Kahler found an involvement of the perineural lymphatics in 91 per cent of cases of prostatic carcinoma; both the large ones and the small had the same instance of perineural enlargement. Prostatic carcinoma rarely causes symptoms until the disease is far advanced, thus adding to the difficulty of recognition in the early stages.

Dr. Hinman has shown us what good results can be obtained if prostates are removed while the growth is still confined to the prostate. Even after we have disposed of this small group of operable cases we still have a large problem. Transurethral resection is the simplest and in the majority of cases the most satisfactory procedure when obstruction is present. It gives adequate relief for prolonged intervals and can be repeated if necessary. Endocrine therapy is a great aid, and in some cases may reduce the gland sufficiently in size to obviate the need for surgical relief of the obstruction. In general, patients who have cancer of the prostate are made more comfortable by endocrine therapy, either by castration or by the administration of estrogen, or a combination of both, than by any other method. They live longer and have less discomfort, although the majority, after a variable period of improvement, relapse and die of the disease. Endocrine therapy exerts different degrees of benefit on different types: although in some cases it is of no benefit, it may even provide a cure in an exceptional case.

The Management of Acute Neck Infections

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THE prime consideration in the treatment of acute neck infections is the condition of the patient. It is imperative that his immediate general condition be considered while the exact diagnosis and specific treatment are being determined.

The length of the patient's illness, the cause of infection and the identity of the infecting organism are things the physician wishes to know. Likewise he must know whether the process is suppurative, non-suppurative, or vascular. These are the factors which determine how ill the patient is, but more frequently than not it is impossible to sum up all this data in the first few minutes. Therefore, the first two questions one asks in determining the measure of the patient's illness are:

1. Is the patient dyspneic? 2. Is the patient "septic"?

If the patient is breathing easily and displays no signs of severe sepsis, the physician may feel free to take more time in the evaluation.

IS THE PATIENT DYSPNEIC?

If the patient is having difficulty in breathing, he should not be left without competent medical care at hand nor without a tracheotomy set at the bedside.

The cause of the dyspnea is important: Is it suprahyoid, as in Ludwig's disease, or is it infrahyoid? If it is purely obstructive, a tracheotomy will relieve the patient; however, there are those who believe that the death of some of these patients is not due to asphyxia but to pressure upon, or irritation of, the carotid body. Whether this explanation is adequate cannot be said, but almost all physicians have seen patients with acute phlegmons or abscesses in the neck die suddenly without obstructed airways. Mediastinal extension must be kept in mind in cases of infrahyoid obstructions.

If trismus is not marked, cellulitis not massive, and dyspnea seems to be due to laryngeal obstruction, then a tracheotomy set should be kept at hand and the procedure performed when indicated. When the floor of the mouth is massively involved, however (as in Ludwig's disease), and there is a marked suprahyoid obstruction, one should not tarry long in incising the area of infection. Whether pus is obtained or not, the cellulitic area has been decompressed. This, the author believes to be important, although many take exception and hold that the procedure is a failure unless pus is liberated. It is true that one has a feeling of great satisfaction when pus spurts from the wound, but it should be remembered also that many patients progress rapidly to recovery even when pus is not obtained at incision.

The obstruction due to peritonsillar and to retropharyngeal disease is usually obvious. The possibility of a foreign body must be considered.

If there is marked trismus, but a good airway and a good voice, it is probably safe to spend more time on observation of the patient. Indirect laryngeal examination should always be tried. An adequate airway is essential.

IS THE PATIENT "SEPTIC"?

In using the term "septic," the author does not mean "toxic." The patient with a flushed, hot face, a full bounding pulse, even a profuse perspiration but with warm skin, as seen in acute fevers and in acute tonsillitis, is considered toxic.

In contradistinction, there is the patient who is pale, often ashen, who has a fast weak pulse and a cold clammy skin. This patient is considered "septic." The former appears healthy-sick; the latter, deathly sick.

If the patient's condition falls into the "septic" definition, a periphlebitic or an endophlebitic process must be considered and appropriate action taken. In periphlebitis there is suppuration adjacent to the vein; while endophlebitis may have resulted from a mild infection, the evidence of which has largely disappeared by the time the sepsis is apparent. One occasionally sees a patient in a quiet interim when he acts and looks and feels fine. If he has had any indication of chills and fever preceding examination, he should be kept under observation for at least ten days. Such patients sometimes develop septicemia.

The injudicious and excessive administration of sedatives or morphine is not only dangerous to the patient but very seriously confuses the clinical picture. It should be remembered that pallor and clamminess in a patient may be the result of loss of blood, and that the lost blood must be replaced. Shock, when present, must be combatted.

CLINICAL DIAGNOSIS

Having considered dyspnea and severe sepsis, and the immediate general condition of the patient, we may now raise our sights for longer range.

In dealing with acute neck infections, the history is most important. One should know the duration of the process and its development until first seen. The mode of origin—dental abscess, dental extraction, fracture of the jaw, tonsillar or peritonsillar infection, pharyngitis, salivary calculi, scalp infection, trauma, or other infections in this area—often gives a lead as to the location of the disease.

Certain areas of the neck are so frequently involved in cellulitic or suppurative processes, and present such characteristic signs and symptoms, that they have become individualized as spaces. Examples of these are the pharyngomaxillary and the mastica-

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tor. A knowledge of the anatomy, and of the characteristic clinical pictures produced, greatly facilitates a systematic examination, a differential diagnosis, and a rational treatment of patients with acute neck infections.

Pharyngomaxillary involvement is usually preceded by a pharyngeal infection or operation. There is trismus or difficulty in opening the mouth, tenderness and induration at the jaw angle, and displacement of the lateral pharyngeal wall toward the midline with little or no acute inflammation.

Masticator[3] disease is preceded by a history of dental infection. The trismus is usually more intense than in pharyngomaxillary infection, the pharyngeal swelling may be present, and the external swelling or induration is usually very intense. One encounters great resistance upon attempt to depress the posterior portion of the tongue on the affected side—a sign not present in pharyngomaxillary disease.

It must be borne in mind that trismus is a cardinal symptom of tetanus.

Because the term "Ludwig's" has become so firmly established, but often so loosely used, it is well to state what we consider as Ludwig's disease. We use the term to designate massive cellulitic invasion of the floor of the mouth which crowds the tongue to the palate and exerts such rapid and extensive pressure in all directions as to create one of the most dangerous and rapidly fatal processes occurring in the neck. The signs may be confined to the floor of the mouth, but more commonly the swelling is both above and below the mylohyoid diaphragm. Edema of the oral floor can be a symptom of lesser severity and the condition of the patient must be our guide.

Large submental swellings and indurations are usually processes involving lymph nodes, secondary to infections of the lower lip or chin, and are not to be confused with the serious picture of Ludwig's disease. Infection of the salivary glands, as well as acute inflammation of congenital cysts, are always considered. Superficial adenitis usually offers little difficulty.

Not infrequently one sees a patient with intense pain and induration in the area of the upper one-third of the sternomastoid muscle. There is marked torticollis, with the chin usually elevated, and often a temperature chart indicating sepsis. When the cause can be established, it is found to be a scalp or skin infection. Suppurative adenitis beneath the posterior border of the sternomastoid muscle produces the symptoms.

As disease does not always respect carefully described anatomical lines, the foregoing systematic outline serves us well in the process of diagnosis; and in the final analysis, the "pus is where you find it."

TREATMENT

Sulfonamides and penicillin have made a considerable change in the therapy and the prognosis of acute neck infections. If there is suppuration, incision and drainage is done, usually with the use of sulfonamides or penicillin before and afterwards. In the non-suppurative cases, or phlegmons, we try the sulfonamides and the penicillin for a week or more unless alarming symptoms intervene. These cellulitic processes respond readily, as a rule. The patients with purely phlebitis involvement, with chills and fever and a high leukocytosis receive the same intensive therapy. If the sepsis continues or metastases develop, ligation is required—and the therapy is continued.

In a few cases the disease does not respond to sulfonamides and penicillin. In such cases, the organism is probably a virus or, possibly, an anaerobe which is not sensitive to the drug used. The outcome depends upon the balance between the patient's resistance and the organism's virulence.

Arterial erosion from acute neck infections demands attention to the vessel or vessels involved. Furstenberg[2] said: "Several hemorrhages of increasing proportions presage the fatal loss of blood and emphasize the need of immediate surgical interference. The anticipation of such an accident calls for another life-saving measure, namely, ligation of the common carotid artery." The internal carotid is the artery most commonly eroded. Common carotid ligation sometimes fails to control the hemorrhage. In such cases, the bleeding is either directly from the external carotid, or a retrograde flow through the external into the internal carotid. Brownell[1] reported such a case a few years ago. The corrective procedure is to tie either the external or the internal carotid.

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REFERENCES

1. Brownell, Durwin H.: Hemorrhage as a serious complication of throat and neck infections, Pacific Coast Oto-ophth. Soc., 26:68-80, 1941.

2. Furstenberg, A. C.: Acute suppurations of throat, mouth and cervical regions, Pacific Coast Oto-ophth. Soc., 21:14-25, 1936.

3. Hall, Colby, and Morris, Francis: Masticator space, Ann. Otol., Rhinol., & Laryng., 50:1123 (Dec.), 1941.

A Health Department's Role in the Cancer Program

Lester Breslow, M.D., *San Francisco*

NUMEROUS expressions of the need for a comprehensive cancer control program press upon us. The most obvious of these is the record of mortality. Each year over 12,000 persons in California die of cancer. This is four times the number of those who died of cancer in 1918. During that period, cancer has risen from fourth to second place among the causes of death. It has been estimated that approximately one-third of the current deaths from cancer could be avoided if all available knowledge were applied. This means that approximately 4,000 Californians are dying each year unnecessarily.

The public is demanding that action be taken. This is evidenced by support for federal and state legislation for cancer control activities as well as by contributions to the American Cancer Society.

In acknowledging the need for cancer control, we may ask what the components of a complete program should be. The National Advisory Cancer Council has stated these to be: "Statistical research, educational activities with lay and professional groups, and the provision of adequate diagnostic and treatment facilities, including prevention or detection clinics, diagnostic and treatment clinics, consultation services, tissue diagnostic services, an adequate number of hospital beds, and special facilities and services for patients in a terminal condition at hospitals or in their own homes."[1]

It is clear from the broad scope of these suggested activities that no one agency or group can carry the full load. Rather, a mobilization of all resources available for cancer control is required. The medical profession, public health departments and voluntary health agencies should share the main responsibility for the movement. Other groups, however, also have a distinct contribution to make. Among these should be mentioned the allied health professions—dentists, nurses, medical social service workers—as well as hospitals and medical schools. The most urgent need is for the development in each state and community of an overall plan which will integrate the activities of these various groups.

This discussion is concerned with the particular role of health departments in the cancer program. Many persons, both in and outside of public health organizations, have not yet recognized that there should be a role. They have adopted too narrow a working definition of public health, thinking of it as restricted to environmental sanitation, the control of communicable diseases, and vital statistics. It is true that most health departments in the past have devoted their energies largely to these activities because available knowledge and techniques permitted the greatest saving of life to be accomplished by action in those directions. The success of endeavors against the communicable diseases and other causes of death in infancy and in early adult life has increased the average length of life. Consequently, those diseases which occur primarily in the later decades of life, cancer among them, are now assuming increasing importance.

Health departments, if they are to fulfill their obligations to the public, must concern themselves with these present causes of mortality. The California State Legislature, in establishing the State Board of Health in 1871, certainly did not conceive its duties in a narrow sense when it directed[2] that "the State Board of Health . . . shall take cognizance of the interests of health and life among the citizens generally." Health officers in this and other states are giving increasing attention to their responsibility for assuring maximum utilization of resources for the reduction of deaths and disability from cancer and other chronic diseases.

In the course of their experiences with other health problems, health departments have developed several techniques which are applicable in the control of cancer. Public health agencies may be expected to use those services and resources already existing within their organizations as a contribution to the overall plan previously mentioned.

Statistical research is basic to the attack on any health problem. In the case of cancer, certain information may be secured from an analysis of the death certificates. However, for a full picture, study of morbidity data is also essential. Without it we do not even know the scope of the problem, and the number of cases of the disease. Basic epidemiological knowledge, the natural history of the disease, especially in the less common types of cancer, is lacking. Progress against the disease as the program gets under way can be measured only by an adequate quantitative system. Follow-up of cancer patients after treatment would be greatly facilitated. Actual measurement of the effectiveness of the methods of treatment can be accomplished only with a well organized record system.

Health departments have developed extensive statistical services. Death certificates are routinely analyzed by health departments as are case reports of a number of diseases. These services have necessitated the building up of staffs of qualified public health analysts and the elaborate equipment of modern statistical operations. It is only logical that these be used in the interests of cancer control.

From the California State Department of Public Health.

Read before the C.M.A. Cancer Commission and the section on Public Health at the 76th Annual Session of the California Medical Association, April 30-May 3, 1947, Los Angeles.

The public health nurse is practically a symbol of the present day health department. It is she who visits the homes of all classes of citizens in order to give direct service and to carry the educational message of public health. It is she who sees health problems in the raw and who is in a position to give needed advice. The public health nurse has had considerable experience with case-finding in a variety of diseases. The pattern of teaching the public to recognize early significant signs and symptoms of disease and stimulating prompt medical attention, is applicable to cancer. With proper emphasis on the problem of cancer in her training and supervision, the public health nurse can be a strong arm of the cancer case-finding program.

Besides finding cases of disease, the public health nurse has also gained experience in helping to hold cases under proper medical supervision once they have been discovered. She has learned that establishing contact between the patient and the physician is often not enough. Under the direction of the physician, it has been her responsibility to see that the patient is kept under medical care. Her usefulness as an adjunct to physicians, hospitals and clinics handling cancer patients becomes obvious. It may be necessary for her to interpret and reenforce the advice of a physician regarding a plan of treatment or after treatment has been given. She may be needed to assure the patient's return to the physician for observation and further therapy.

The public health nurse also may give or supervise the home nursing care of the cancer patient. Not to be neglected is her potential role in teaching the public the hygienic aspects of cancer control, such as the significance of oral hygiene, chronic irritation of moles, periodic self-examination of the breasts by women, and other matters of individual hygiene which are being increasingly recognized as important in the reduction of deaths from cancer.

One of the newest specialists in public health is the health educator. Such a person is qualified in two particular activities. One is imparting knowledge and developing motivation concerning health in the general public and in special groups; the other is assisting in community organization of resources for attacking a particular problem. Since cancer control involves the coordination of so many different agencies, the potentialities of the health educator are great.

The health officer himself has responsibilities in cancer control—to make available the resources of his department for the attack on this disease which is increasingly affecting his community and to join with the medical profession and other agencies in developing and implementing a comprehensive plan. He is also interested in seeing that the program is integrated with the other health activities of the community.

One specific direction which this interest may take is in connection with the cancer detection center. This device for screening apparently well persons in order to detect early signs of the disease has proven itself to be of considerable value and is endorsed and supported by the American Cancer Society. The health officer has participated in other programs of this sort and is now seeing them started not only for cancer but also for heart disease and diabetes. The possibility of integrating these various case-finding endeavors naturally occurs to him. An adequate detection examination for cancer includes a chest roentgenogram. This will reveal not only certain forms of cancer but also tuberculosis and some forms of heart disease. In the interests of economy, the public health officer desires the maximum utilization of such a device for the detection of all diseases. The relatively complete physical examination required to detect the principal forms of accessible cancer reveals a great variety of other abnormal conditions. Persons in whom such conditions are discovered should be referred to practicing physicians for medical attention (and routinely are in detection centers) just as are findings indicative of cancer.

Wherever established, the detection centers have evoked a highly favorable public response and have resulted in the appearance of many persons in physicians' offices for the care of previously undisclosed disease, often in the early stages. This is a development of great significance in public health. Perhaps its greatest importance lies in the fact that it affords a logical place for the general practitioner to fit into the program. Thus far, the cancer control movement has been largely in the hands of the specialist. The detection center, where many diseases treatable in a physician's office are discovered, represents a real opportunity for the general practitioner.

As to the cancer control program of the California Department of Public Health, which was inaugurated October 1, 1946, an important element of it from the outset has been close liaison with the Cancer Commission of the California Medical Association and the California Division of the American Cancer Society with a view toward development of a comprehensive State-wide plan.

As a first step in this direction, the Cancer Commission and the State Department of Public Health have undertaken a study of the cancer services and facilities in the State. The general purpose is to assemble the facts and stimulate interest necessary for the development of a well-rounded cancer control program. The more specific objectives are: (1) to gather and present the statistical and epidemiological data which are available concerning cancer, to evaluate its sufficiency and suggest ways in which further information can be secured; (2) to determine what educational activities are now being conducted for lay and professional groups and how these can be expanded; (3) to obtain information on present diagnostic and treatment facilities and propose any feasible extension and improvement with particular reference to physicians' services, hospital services, tumor consultation clinics, detection centers, public health and visiting nurse services and medical social services; and (4) to bring into view the resources for cancer control and suggest how these can be coordinated.

This program is to be conducted county by county in cooperation with and under the sponsorship of the various county medical societies. In each instance, there will be an attempt to determine the extent of services at present and how they could be improved. The program, as a whole, in each county where the study is requested, will be evaluated with reference to the estimated need. Specific recommendations are to be made for strengthening local activities.

In each county a report is to be prepared jointly by the Cancer Commission of the California Medical Association, the county medical society and the State Department of Public Health. These reports will be of an advisory nature and, it is hoped, will provide the basis for planning the expansion of the cancer control program by the medical society and other agencies in the county which can contribute.

Upon the completion of the studies in the individual counties, the data will be available for the establishment of a State-wide plan.

Another sphere of activity of the State Department of Public Health is the development of statistical services. These are of two forms. One is the analysis of existing mortality data for the State as a whole and for individual counties. The other is the establishment of a tumor record registry in cooperation with hospitals, clinics and physicians of the State. Many states have made cancer a reportable disease by law or regulation. The success of these compulsory morbidity reporting systems has been dubious. In almost all places where they have been tried up to the present, only a small fraction of the cancer cases have been reported.

Since most of the cases of significant cancer are dealt with in hospitals and clinics, the record rooms of these institutions appear as the best source of morbidity data. The proposed program of the State Department of Public Health therefore includes working on a voluntary basis with cooperating hospitals and clinics in the development of a registry system. In connection with the completion of the brief record forms and the forwarding of them to the State Department of Public Health, the participating hospitals will be provided funds to carry out the work, consultation by a staff of public health and records analysts, analyses of the institution's experience with cancer, and assistance in special studies upon request.

The usefulness of this service for the cancer control program as a whole is obvious. Connecticut has already had several years of successful experience with this type of registry. In no other state has such a significant amount of data been assembled. Such a statistical service is a basic responsibility of the health department in entering the attack upon any disease.

A third aspect of the State Department of Public Health's cancer program is in the training of personnel. Funds are used for the academic training of physicians, nurses and other professionally qualified persons in postgraduate work which may fit them to enter the general field of public health and to make a contribution toward cancer control. Besides this academic training, a series of in-service training institutes for the allied health professions is planned, similar to those which the Cancer Commission has undertaken for physicians. The first of the series has already been completed. It consisted of 15 meetings in as many parts of the State, attended by 1,179 persons, mostly public health nurses, for a one-day discussion of the role of the public health and visiting nurse in the cancer program. This series was sponsored jointly by the Cancer Commission and the Department of Public Health. The speakers at each meeting included a physician representative of the Cancer Commission to present the clinical aspects of the discussion. The response to the institutes was excellent.

The department contemplates similar training for participation in cancer control for other professional groups.

It will be noted that all of these activities are conducted by the State Department of Public Health. The philosophy of the modern public health movement is that a program shall be carried out, as far as possible, by city and county departments of health. This guarantees local direction and adjustment to varying circumstances in the different communities. As the cancer control program develops, it is essential that services in this field, also, be initiated in local public health agencies. The three aspects of the program begun thus far—survey of services, tumor record registry and training of personnel—obviously had to be started at the State level. However, city and county health departments are expected to assume their appropriate responsibilities in the program as it progresses. They have available a variety of personnel and services in their organizations which should be utilized if the community-wide effort against cancer is to be completely effective.

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REFERENCES

1. Journal of the National Cancer Institute, v. 6, No. 5, p. 243 (April), 1946.

2. First biennial report of the State Board of Health of California, 1871, p. 15.

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Discussion by C. Hiram Weaver, M.D., *Los Angeles*

I have had the privilege of studying Dr. Breslow's paper on A Health Department's Role in the Cancer Program and wish to congratulate him on the broad field to be covered by the State Department of Health and its component branches of County and City Departments. As a practicing physician interested in the broad cancer control program, especially since 1928, I have seen the advance of cancer knowledge spread gradually to physicians and then to the lay public. As a director in the American Cancer Society for Southern California during the period from 1930 to 1940 when the American Society spent its time and money trying to educate the physician to the broad cancer problem, I can say that it seemed quite a task to erase the defeatist attitude of a great majority of physicians.

Dr. Breslow's mention of the work done on statistics in the

State of Connecticut prompts me to mention the enormous amount of work begun almost 20 years ago by Dr. Lombard with and for the State of Massachusetts in its formation of various Cancer Clinics and the large Pondville Institute for Cancer. Also we cannot forget the fact-findings done in the late '20s by the State Medical Association of Pennsylvania in a questionnaire sent out to all practicing physicians in Pennsylvania on the broad subject of cancer. The findings of the Pennsylvania State Medical Association certainly proved that the attitude of the physicians in the late '20s and early '30s, on the subject of cancer, varied very much from our present concepts of the disease. Comparing this Pennsylvania report with the present attitude of physicians on cancer is most interesting.

Thanks to the preliminary work begun over 20 years ago by the various cancer organizations, we are now ready, I believe, to accept the work outlined by the State and suggested by Dr. Breslow in his very excellent paper.

If statistics are to be available and usable in the cancer program—and this means finally to the benefit of the cancer patient—the great horde of cases has to be tabulated as to diagnosis, morbidity, treatment and end results. There is no better way to do this than to coordinate our many hospital records and tumor clinic histories with this suggested program. We all know our follow-up system in cancer is difficult and costly, both in time and patience. Anything that can be done by the public health nurse in eradicating the tendency of the patients to seek the various cultist in fadish treatments should be accelerated, and Dr. Breslow's suggestion of the public health nurse, educated in cancer care, should be a help in this respect. No doubt the public health educator needs training along these lines with the public health nurse, as he is also a contact man for the cancer program.

Cancer, being the second greatest cause of death, should of course be a reportable disease, and the neglect of some physicians to report cancer is difficult to understand.

I believe that all health departments are so organized that they could accept this added responsibility suggested by Dr. Breslow. My five years of service as a Health Commissioner in the Los Angeles City Health Department has acquainted me with our large personnel well enough to state that I believe the Los Angeles City Health Department could take over this added responsibility and duty probably without the addition of any more personnel than four, or possibly six, public health nurses. We now have three well trained health educators, any one of whom could take on this job.

I do not see that in any way this suggested program of Dr. Breslow's would preempt or in any way intrude upon the private practice of medicine or the working and correlation of the tumor clinic with the private physician.

Myocardial Infarction and Heart Failure

Arthur Selzer, M.D., *San Francisco*

THE two common cardiac conditions, acute myocardial infarction and cardiac failure, occur frequently in the same patient simultaneously. Their coexistence is not a coincidence but usually there is a causal relationship between them in that one of them precipitates the other one.

It is obvious that acute myocardial infarction, if large enough, may easily precipitate cardiac insufficiency. On the other hand myocardial infarction may develop in the course of heart failure which is the result of other causes. The purpose of this communication is to discuss briefly various aspects of this relationship as found in a series of cases in which autopsies were done.

Patients with congestive cardiac failure caused by hypertension, valvular disease, or other less common causes who have never shown clinical signs of coronary insufficiency, occasionally develop acute myocardial infarction. This may be brought on in different ways. First, myocardial infarction may occur as a result of coronary embolism, the most common source of the embolus being mural thrombosis, which is often present in dilated heart chambers, particularly in the presence of auricular fibrillation. We have recently seen an infarction of the myocardium in an eight year old child with heart failure due to hypertensive heart disease associated with pyelonephritis, where a true coronary embolism came from a mural thrombus. These cases are not common but are important enough to be considered in the differential diagnosis. Another way in which heart failure may precipitate the formation of a myocardial infarct is the production of thrombosis at the site of a previously existing stenosis of one or more branches of coronary arteries. Various factors may contribute to the formation of a thrombus at the site of the stricture: increased tendency to intravascular clotting which occurs in cardiac failure and is possibly enhanced by various drugs, or slowing of the circulation and a fall in blood pressure. In certain circumstances interference with the coronary blood flow may bring about a myocardial infarction even in the absence of a complete occlusion of a major branch of the coronary artery.

Myocardial infarction complicating chronic cardiac failure in hypertensive, rheumatic, luetic and other types of heart disease is a very serious complication. The superimposition of acute damage to the failing myocardium is often fatal within a short time.

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Read before the California Heart Association and the section on General Medicine at the Annual Session of the California Medical Association, April 30-May 3, 1947, Los Angeles.

Demonstration at autopsy of a recent infarction of the myocardium in patients dying from chronic cardiac failure due to causes other than coronary heart disease is quite common although the infarction is often unsuspected during life. For some unknown reason myocardial infarction occurring in the course of heart failure develops frequently without pain or any acute equivalent of it. In a series of 130 consecutive cases of recent myocardial infarction taken from our autopsy file, 22 infarcts were found in patients who were in chronic heart failure before the development of the infarction. The clinical symptoms and signs suggested the presence of infarction in only six of these patients, while in the remaining 16 patients it appears that the diagnosis could not have been made.

Thus in the course of chronic heart failure myocardial infarction is a fairly common complication which, along with pulmonary infarction and embolism, ought to be suspected and investigated electrocardiographically if an unexplained change in the condition of the patient takes place.

Myocardial infarction as a complication of chronic heart failure is a very serious and often terminal event. It occurs most often in patients for whom the prognosis is very poor to begin with. On the other hand myocardial infarction occurring in patients whose physical activities showed no significant limitation from cardiac symptoms prior to the development of the infarction is referred to as "primary" myocardial infarction. Heart failure developing secondarily in the course of myocardial infarction belongs to an entirely different class of cardiovascular events. Myocardial infarction often runs the course of an acute illness with complete recovery, and the presence or absence of heart failure and of various other complications in its course is of immediate and great practical importance.

Physiologically speaking, heart failure is a direct consequence of acute myocardial infarction and is present in every case of sizable infarction of the myocardium. Destruction of a portion of the myocardium always affects the contraction of the heart and causes a fall in cardiac output, dilatation of the affected chamber (almost always the left ventricle), and increased pressure in the left auricle and pulmonary veins, even if these events take place only momentarily. Dilatation of the left ventricle acts as a stimulus for a more forceful contraction of the non-infarcted muscle fibers, and the effective output may be reestablished if favorable conditions exist.

From the clinical standpoint it is important to know what role this decompensation plays in the course of myocardial infarction. Patients who have had no significant cardiac symptoms prior to the development of the myocardial infarction can be

divided into several groups, the classification depending upon the presence and degree of cardiac failure resulting from the infarct. First, there are patients in whom no clinical signs of left ventricular failure are evident, although in almost every case latent left ventricular failure can be demonstrated by the use of special methods.[3] Or, patients may show evidence of mild left sided failure, such as basilar rales, gallop rhythm and mild to moderate dyspnea, which are often transitory. Still other patients may have severe left ventricular failure: pulmonary edema, marked dyspnea, orthopnea and cyanosis. Secondarily to left ventricular failure the action of the right ventricle may become insufficient and increased venous pressure and peripheral edema may appear. Finally, in some patients the predominant clinical picture is that of shock.

What is the effect of these various forms of circulatory failure upon the course and mortality from acute myocardial infarction? In order to attempt to answer this question a study was made of a series of 95 cases of fatal myocardial infarction in which autopsies were done. These cases were unselected, but in all of them myocardial infarction was the primary disease and all the patients died within six weeks from the onset of the infarction.

The incidence of the three forms of circulatory failure was as follows: left ventricular failure was present in 65 cases; shock occurred in 20, and right ventricular failure in 17 cases.

Left ventricular failure, by far the commonest clinical manifestation of circulatory derangement due to myocardial infarction, appears, however, to be of least prognostic significance. Of the 65 patients in whom it was present, only 14 died of progressive cardiac failure, while in the remaining 51 the signs of left ventricular failure cleared up or remained mild, and the patients died of secondary complications unrelated to cardiac failure.

Right ventricular failure occurred in 17 patients. In contrast to left ventricular failure, systemic congestive failure occurred late for the most part and was invariably fatal. Only one patient developed right ventricular failure within the first week of the illness, and that was in a case of myocardial infarction complicated by perforation of the interventricular septum. This condition is known to be associated with marked right ventricular failure because the increased volume of blood in the failing left ventricle is shunted through the septal defect directly into the right ventricle, thus eliminating pulmonary congestion and leading to systemic congestion. In the remaining 16 patients who had right ventricular failure, it developed secondarily to left sided failure, usually in the second or third week. It was noticeable that in half of them postmortem examination revealed, in addition to the myocardial infarction, the presence of multiple pulmonary infarcts, and in these cases right sided failure was most severe. These findings suggest a causal relationship between pulmonary emboli and infarcts and right ventricular failure in the course of myocardial infarction. Evidently right ventricular strain due to pulmonary emboli, added to pulmonary hypertension caused by left ventricular failure, may bring about failure of the right ventricle although either of these two factors alone might be insufficient for the development of clinical manifestations of systemic venous congestion. It is believed that knowledge of this relationship may be of some diagnostic value through directing attention to the presence of pulmonary emboli in patients who show marked right ventricular failure. This may be of only academic interest, however, because the prognosis is very unfavorable if right ventricular failure develops in the course of myocardial infarction.

Shock occurred in 20 patients. It was an early complication, occurring with or shortly after the initial attack of pain. In 19 patients the course was progressively downhill. In one patient the signs of shock cleared up but the patient died later from an unrelated complication.

The seriousness of the condition of the patients who develop shock in the course of myocardial infarction need not be emphasized: they present perhaps the most dramatic clinical pattern of this condition. The cause of shock is not known. It represents "forward" failure of the circulation, namely, a sudden marked decrease in cardiac output with clinical manifestations of intense vasoconstriction, a compensatory attempt to maintain reasonable blood pressure as long as possible in spite of the falling cardiac output. The mechanism of traumatic and surgical shock is known to be peripheral and not cardiac in origin, namely, failure of sufficient quantity of blood to reach the heart. According to Starling's law of the heart, the diminished venous return causes a fall in cardiac output, so that the heart is involved in this process passively without true insufficiency of the myocardium. It has been suggested[1] that the shock of myocardial infarction is cardiogenic: the damaged left ventricle fails to maintain the output, and the suddenness of this may produce the clinical picture of forward failure more prominently than that of congestive phenomena. This theory has many attractive points, but it is based on speculation and is thus far not proven by any studies of circulation. On the other hand, there are some points favoring the theory of peripheral origin of shock in myocardial infarction, possibly a reflex pooling of the blood in the periphery with a secondary fall of the venous return and cardiac output. This alternative view, if confirmed, implies that shock is a complication and not a direct consequence of myocardial insufficiency, and emphasizes the importance of active therapeutic measures.

It is very instructive to present the immediate causes of death in the series of 95 patients with myocardial infarction. As has been pointed out, these were patients with "primary" myocardial infarction, and therefore were well suited for the consideration of the immediate effects of the acute infarct upon the circulation. Theoretically, myocardial infarction can bring about death in two ways: it can damage the myocardium to such an extent that the effective maintenance of the circulation be-

comes impossible; or it may lead to secondary complications which prove fatal. In the first group one would expect either immediate death or the development of cardiac insufficiency with continuous progression until death. In the second group cardiac failure is often absent, and this favorable course suggests that the patients might have recovered if the complications could have been avoided.

In this series the immediate causes of death, or the most important factor immediately responsible for death, were as follows: progressive cardiac insufficiency, 14 cases; shock, 14 cases; sudden death (ventricular fibrillation?), 24 cases; thromboembolic phenomena, 15 cases; cardiac rupture, eight cases; secondary coronary occlusion, five cases; incidental complication, 15 cases.

These figures indicate that cardiac insufficiency is not the most important cause of death in myocardial infarction. All the patients in this series had been hospitalized and had lived for at least several hours after the onset of the illness. No cases in which the patients died within the first hour or two are included in the statistics, which are for the most part based on hospital material. It is quite probable that patients who die before having had time to reach the hospital represent the most serious cases from the standpoint of circulatory derangement. It has been estimated that the immediate mortality from myocardial infarction of the "primary" type is below 20 per cent. In thoses cases in which death occurs, it is doubtful that it occurs in more than one third within the first few hours. Thus one can visualize the effective compensatory measures occurring early in myocardial infarction. In 90 per cent or more of patients with myocardial infarction the circulation is effectively reestablished, and these patients are candidates for recovery from the immediate attack. Many of them can recover completely for indefinite periods of time. Some of them, however, succumb to various complications developing within the first few weeks following the attack. The small number of patients who die of circulatory failure either develop fatal decompensation at the onset or procced into progressive cardiac failure.

It is important to realize that more patients die in the course of acute myocardial infarction from secondary complications than from irreparable cardiac damage. Theoretically the presence of heart failure and a progessively downhill course indicate irreparable cardiac damage. Patients in whom these conditions exist represent the irreducible mortality from myocardial infarction. Patients who die even though an effective circulation can be reestablished despite the damage to the heart, should be considered as dying prematurely and unnecessarily. They die because present-day methods of prevention or treatment of various complications are inadequate. The three types of complications responsible for most premature deaths are thromboembolic phenomena, shock, and fatal arrhythmias. The nature of each of these complications is such that prevention or effective treatment appears within the realm of possibility. So far, the only hopeful approach toward the solution of this problem is the recent introduction of anticoagulants in the treatment of myocardial infarction. Not yet proven completely safe and effective, and requiring elaborate technical facilities, this method may eventually become routine treatment of myocardial infarction.

The need for finding better methods of treatment of myocardial infarction is very urgent and its importance is emphasized by two facts. First, the number of persons at stake is very large. It has been estimated[2] recently that more than 100,000 persons die annually from coronary occlusion in the United States. The second point is the ever-increasing realization in recent years that persons who recover from acute myocardial infarction need no longer be considered chronic cardiac invalids. A large proportion of them regain normal cardiac function and enjoy indefinite periods of healthy and useful life after recovery from myocardial infarction.

The large number of potentially preventable deaths from acute myocardial infarction among patients included in the present series indicates the possibility that the immediate mortality from myocardial infarction may be reduced considerably in the future.

SUMMARY

The relationship between myocardial infarction and cardiac failure manifests itself in two ways: myocardial infarction may appear as a complication of chronic cardiac failure, or heart failure may appear as a sequence of acute myocardial infarction in patients who had no disturbance of cardiac function prior to the formation of the infarct.

Various forms of circulatory failure appearing in the course of myocardial infarction are discussed. Left ventricular failure is the most common, but most often is a self-limited, reversible process. Right ventricular failure is relatively uncommon, is often associated with pulmonary complications, and is almost invariably fatal. Shock, also a serious complication of myocardial infarction, is usually fatal in these circumstances.

An analysis of a series of cases of fatal myocardial infarction revealed that severe progressive cardiac failure was the primary cause of death in less than 25 per cent of the patients in the series. Other patients died as a result of secondary complications developing in the first few weeks after the coronary occlusion.

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REFERENCES

1. Boyer, N. H.: Cardiogenic shock, New England J. Med., 230:226 (Feb. 24), 1944; and 256 (Mar. 2), 1944.

2. Master, A. M.: Incidence of coronary artery occlusion, Amer. Heart J., 33:135, 1947.

3. Selzer, A.: Circulation in acute myocardial infarction, Arch. Int. Med., 76:54 (July), 1945.

Artificial Insemination

John O. Haman, M.D., *San Francisco*

EACH year in this country 50,000 couples marry who cannot have children and there are always 2,000,000 couples who are involuntarily childless. Ten per cent of involuntary childlessness is because the male is either azoospermic or his semen so severely deficient that treatment is hopeless. There are always among us, therefore, some 200,000 husbands who will never be able to produce offspring.

This figure will grow as marriages increase, and it is for this large group that artificial insemination holds promise.

These couples have few alternatives:

First: They can attempt to adjust themselves to the realization that theirs will be a childless union.

Second: They can adopt children.

Third: They can divorce and remarry.

Fourth: The wife can have extra-marital coitus, with or without her husband's consent.

Fifth: They can have artificial insemination performed.

Historically, it is generally believed that artificial insemination was first practiced in 1322—upon animals. (A cunning Arab sheik who was jealous of a rival stole into an enemy camp in the dead of night and artificially inseminated all the mares with semen of an inferior stallion.) But now, an overlooked Talmudic document has been brought to light. It antedates the time of the Arab tale by approximately 1,100 years. Furthermore, this document discusses in academic manner the artificial insemination of humans, although no mention is made of its intentional application.

During the 17th and 18th centuries, Swammerdam, Jacobi, Spallazani and others experimented with artificial insemination in different animals. Later, John Hunter and J. Marion Sims inseminated humans with some success, but soon gave up the practice.

Ivanoff introduced artificial insemination in animal husbandry into Russia in 1899 and since that time it has been used extensively to improve the livestock of the state controlled farms. In this manner the services of valuable sires have been spread over large numbers of cows, ewes, and mares. In 1936 alone, more than six million cattle and sheep were artificially inseminated, as many as 15,000 ewes being inseminated by a single ram and over 10,000 cows by one bull.

The excellent results obtained in animal artificial insemination revived interest in the application to humans. From 1902 to 1938, only 24 articles on the subject appeared in the American literature, but since then interest has steadily increased.

The physician treating an infertile couple is faced with many problems. Probably the greatest is posed when he finds the wife to be normal and the husband sterile.

He must then inform the couple of their status, and explain the alternatives open to them. If they decide that artificial insemination is the solution to their problem, his duty and responsibility is greatly increased. The physician must carefully explain the entire procedure to both husband and wife and must point out both the advantages and disadvantages of this method of reproduction. He must be certain that both husband and wife are equally serious and sincere in their request for artificial insemination and that they grasp the psychological and emotional dangers which they face, and that they clearly understand that these problems may recur throughout the remainder of their married life. If either partner shows only half-hearted interest, the subject should be dropped immediately.

An important prerequisite is a probationary period during which the physician will see both the husband and wife and familiarize himself with the mental and psychological make-up of the couple. This "cooling-off" period gives the couple an opportunity to review the picture dispassionately and permits the husband to reconsider what may have been an act of bravado, pity for a childless wife, or an expression of his own wounded pride. The husband must clearly understand the possible emotional effect that this procedure may have on his future relationship with his wife. He must be aware that present sentiments are not always enduring.

It is the physician's solemn duty to refuse artificial insemination if he is not convinced that his patients are fully capable of the great adjustment necessary. By such refusal he saves himself, the husband, the wife, and above all, the potential child, much unhappiness.

The abnormal conditions present in husband or wife indicating artificial insemination, using either the husband's or a donor's semen, can be divided into three groups:

A. Male
 1. Defective spermatogenesis.
 Azoospermia, severe oligozoospermia, faulty germ plasm, and the rare necrozoospermia.
 2. Anomalies of the male genital tract.
 3. Extra-genital deformities preventing normal sexual intercourse.

B. Female
 1. Rh sensitiveness and the rarer major blood group sensitivities.
 2. Extra-genital deformities preventing normal sexual intercourse.

Read before the Section on Obstetrics and Gynecology at the 76th Annual Session of the California Medical Association in Los Angeles, April 30-May 3, 1947.

3. Severe dyspareunia.
4. Impairment of the cervical passage.

C. Sterility with no evidence of cause in either partner.

Group A presents definite reasons for performing artificial insemination and the percentage of pregnancies is high.

Group B is a borderline group, "1" and "2" being positive indications, "3" a probable reason, and "4" a possible indication.

Group C is a composite group with no definite indication, few advocates, the percentage of pregnancies small and the hazards encountered great.

The prerequisites for artificial insemination with a donor's semen are five in number:

1. The couple must desire this method of treatment and understand its legal and psychological consequences.

2. The husband must be irreparably sterile.

3. The wife must produce normal functioning ova in a great majority of cycles.

4. The wife's tubes must be patent and show normal peristalsis.

5. The wife's pelvic organs must be normal.

Various procedures have been utilized for depositing the sperm in portions of the female genital tract. The semen has been placed in the vagina, onto the cervix, into the cervical canal, into the uterine cavity, and directly into the tubes. It has been centrifuged before insertion and also mixed with a variety of fluids and then injected. The semen has been obtained by many methods, masturbation, withdrawal, condom, aspiration from the testicles, and even physiologic artificial insemination by injection of semen from a normal individual into the seminal vesicles of a sterile husband, to be followed by coitus soon after.

The common methods of implanting the semen in use today are intracervical or intrauterine. With a donor's semen it is only necessary to place the sperm at or into the cervical os. However, if the husband's semen is used, it is usually placed in the uterine cavity itself, a dangerous procedure.

Intrauterine insemination is used too frequently and often without an understanding of the indications, the principles of technique, or the risks involved. The fact that a defective seminal fluid is most probably not capable of fertilizing an ovum even if it were deposited directly upon it is a factor very often forgotten. Guttmacher's statement, that "giving sperm a three-inch boost on a six-inch journey is valueless," is based on this fact.

It must be kept constantly in mind that complications may occur. They are not common, and although usually of a minor nature, they are a potential source of serious danger. Several cases of acute salpingitis and pelvic abscesses have been reported. Siegler and Franz have each reported a death following insemination.

These acute pelvic infections may arise from the use of infected semen or from relighting of a dormant tubal infection, or they may be caused by carrying infection up into the uterus from an infected cervix or vagina.

Chemical peritonitis may result from using too much pressure and forcing the semen through the tubes into the peritoneal cavity.

The possibility of causing endometriosis, endocervicitis, puncture of the uterus and tubal pregnancy must also be kept in mind.

Careful selection of a suitable donor is paramount. The donor must remain anonymous to the prospective parents and under no conditions should a member of the family be considered as a donor.

The donor should have the same racial and physical characteristics as the husband and his emotional make-up should approximate that of the husband. He should be 30 to 35 years of age, in perfect health, with no history of familial or inherited diseases, no history of venereal diseases, of superior mentality, and, of course, highly fertile. If possible, the blood group and the Rh factor should be the same as that of the wife.

The timing of the insemination is usually based on the wife's cyclical dates and her basal body temperatures. Insemination is performed, for the first month or two, several times near the midcycle, in an attempt to inseminate at ovulation. After a chart has been compiled for several months, insemination is performed on the day of the drop in temperature and the day of the first rise.

In all cases of the author's series in which the patient became pregnant, insemination was performed either the day before the drop, at the drop, or on the first rise. This substantiates the claim made by many that the basal body temperature is the most reliable of all simple clinical methods known at present to determine ovulation time.

This system worked well where the periods were regular, but where the menstrual cycle was irregular, several attempts were necessary during the month at two to three-day intervals. Here again, however, reliance was placed on the basal body temperature curve to show when ovulation took place.

The results obtained in the author's series correspond closely with the aggregate of those reported by others since 1866 (Tables 1 and 2). In a total of 66 cases, 24 patients became pregnant (36.3 per cent). Thirty-six of the wives were inseminated with a donor's semen, 19 becoming pregnant (52.7 per cent). The husband's semen was used in 30 cases, and in only five, or 16.6 per cent, did pregnancy result.

Of the 66 patients inseminated, 27 had husbands who were azoospermic, nine had husbands with very severe oligoospermia, one a husband who had a hypospadius. Husbands of the remaining 29 were apparently normal. Twenty-three of the 29 patients whose husbands were normal, however, themselves had abnormalities of the cervix.

Inseminations performed on the 66 patients averaged 6.34 per patient (Table 3). The patients were

TABLE 1.—*Results of Artificial Insemination as Reported by Various Individuals Since 1866*

Name	Year	No. of Cases D	No. of Cases H	No. of Preg. D	No. of Preg. H	% of Preg. D	% of Preg. H
Sims	1866		55		1		1%
Prochownik	1915	3		0		0%	
Dickinson	1920	3		2		66%	
Rohleder	1924	127		52		40%	
Seguy	1925	24		0		0%	
Schorohowa	1927	50		22		44%	
Schorohowa	1927	88		33		36%	
Schorohowa	1927	55		22		40%	
Schorohowa	1927	13		9		69%	
Engleman	1927	185		65		35%	
Wilson	1929		1		1		100%
Mason	1929	5		2		40%	
Abbett		37		11		29%	
Pierra	1931	9		1		11%	
Turpault		6		1		16%	
Cohen	1934	2		2		100%	
Douay	1934	2	1	2	0	100%	0%
Seguy	1935	16		7		44%	
Jeanneney	1936	6		1		16%	
Fulconis	1937	50		1		2%	
Goldberg	1938	1		1		100%	
Seashore	1938	1		1		100%	
Lane-Roberts	1939		23		6		26%
Cary	1940	17	18	8	4	47%	22%
Seymour-Koerner	1941			3649	5840		
Isreal	1941	6		5		83%	
Schultze	1941	131		36		27%	
Schultze	1941	3	99	2	13	66%	13%
Copeland	1943		11		6		54%
Halbrecht	1944	52	28	23	2	44%	7%
Warner	1944	9		6		66%	
McKenzie	1944	12		4		33%	
Siegler	1944	42	6	22	2	52%	33%
Guttmacher	1944	49	8	21	0	42%	0%
Kornblith	1944	1	3	1	3	100%	100%
Barton	1945	15	30	10	9	66%	30%
Weisman	1946	87		74		85%	

inseminated one to four times each cycle, and the average number of cycles in which inseminations were done was 3.12. The 24 who became pregnant were inseminated an average of 2.7 cycles each. The AIH* patients among them were inseminated an average of 2.4 cycles and the AID† patients an average of 2.79 cycles. Those that did not become pregnant were inseminated an average of 3.33 cycles, those who were AIH patients having been inseminated an average of 2.29 cycles and the AID patients an average of 4.77 cycles.

There were 13 patients that were inseminated only in one cycle and immediately became pregnant. Also, there were a number of patients, usually those who were being inseminated with the husband's semen, who became discouraged early and stopped inseminations in one to three months (19 out of 24), hardly long enough to give the procedure a fair trial. The successful insemination dates were from day 11 to day 18 (Table 4).

There were eight males born and eight females, and there were two miscarriages. Outcome of the remaining six cases in which pregnancy occurred is unknown because of losing track of the patient.

The length of pregnancy (eliminating the two premature labors) was from 257 to 280 days after conception, the average being 270.5 days. There were no tubal pregnancies in the series.

* AIH: Artificial insemination with semen from husband.
† AID: Artificial insemination with semen from donor.

TABLE 2.—*Aggregate of Results Reported by Various Investigators Since 1866*

	No. of Cases D	No. of Cases H	No. of Preg. D	No. of Preg. H	% of Preg. D	% of Preg. H
	831		279		33.5	
	274	283	168	47	61.3	16.6
Total	1388		494		35.6	

TABLE 3.—*Details of Insemination of 66 Patients*

	No. of Cases	No. of Preg.	% of Preg.	Insem. P	Insem. No P	Insem. Tot.	Av. No. Insem. P	Av. No. Insem. No P	Av. No. Insem. Tot.	Cycles P	Cycles No P	Cycles Tot.	Av. No. Cycles P	Av. No. Cycles No P	Av. No. Cycles Tot.	A.I. on Ov. Date P	A.I. on Ov. Date No P	A.I. on Ov. Date Tot.
D	36	19	52.7	115	203	318	6.05	11.27	8.59	53	86	139	2.79	4.77	3.83	43	51	94
H	30	5	16.6	20	81	101	4.00	3.37	3.48	12	55	67	2.40	2.29	2.31	7	10	17
Tot.	66	24	36.3	135	284	419	5.62	6.76	6.34	65	141	206	2.70	3.33	3.12	50	61	111

Two of the patients had premature labors, one at 238 days and one at 247 days. The babies survived, although one died later of dysentery. There were two

TABLE 4.—*Successful Inseminations, Showing Days of Cycle on Which Insemination Was Performed*

Days of Cycle	11	12	13	14	15	16	17	18	Unknown	Total
No. of Preg.	1	2	3	5	7	0	1	1	4	24

patients who required cesarean section, both because of failure of the cervix to dilate. Both patients had been inseminated with donors' semen. There are ten patients still under treatment, but they are included in the series.

It is interesting to note that 42 different donors were used, but 15 accounted for all the AID pregnancies, one accounting for three and two for two pregnancies each. It was also noted that with the semen from many of the donors the sperm invasion and migration was consistently poor, but the sperm of the 15 accounting for all the AID pregnancies was consistently above average in this respect.

The following complications occurred: Three patients, two with the husband's semen and one with that of a donor, developed acute pelvic inflammatory disease requiring hospitalization. They were given penicillin and sulfathiazole and none developed a pelvic abscess. There were also two cases (both AID) of transient endometritis, but the patients recovered uneventfully in a day or two.

Space does not permit a full review of the legal aspects, but the ordinary rules of law governing doctors are applicable to artificial insemination.

Whether artificial inseminations will ever be approved or accepted will depend upon the results obtained and indisputably established by reputable workers in this field.

There are three well defined pitfalls awaiting the physician who practices artificial insemination: First, the allegation of negligence; second, interference with the rights of the parties, giving rise to possible charges of adultery; third, allegation of conspiracy.

Neither California nor any other jurisdiction has any statutory law aimed at artificial insemination. The law has not kept pace with the advances made in medical science and particularly in the development of artificial insemination. The expressions of public policy and the rights of individuals contained in our statutes have no more contemplated the governing of this field than they have the use of the atomic bomb. The courts have considered the question only rarely and in those few instances the views expressed have been so divergent and so far removed from the cause at hand as to lack authoritative weight.

Case law on the subject seems to be limited to the dictum (language not binding upon future decisions) in one Canadian case, Orford vs. Orford. The court denied the woman plaintiff's claim for alimony, but stated that, in the court's opinion, not the intercourse of the parties but the voluntary surrender of the wife to the reproduction faculties of another person without the husband's consent constituted moral turpitude and adultery. This opinion, so often quoted, is not only merely dictum but also falls short of establishing an opposing precedent, in that it proceeds from Ecclesiastical Law, not recognized in the United States, and is based on the lack of the husband's consent.

However, in a more recent unreported decision by a court in Cook County (Chicago) Illinois, the opinion was expressed that artificial insemination did not constitute adultery.

To protect the physician against the possibility of a civil suit, written consent to the artificial insemination, signed by both husband and wife, should be obtained. In this consent should be set forth in detail the act to be performed and its possible consequences, both legal and medical.

CONSENT FOR ARTIFICIAL INSEMINATION

.....date

We, ..., being husband and wife and cohabitating as such and being over the age of 21 years of age and residing at....., of our own free will and volition do request of Dr..... that he inseminate....., one of the undersigned herein, artificially with the sperm of a white male selected or to be selected by the same Dr..... We make this request since we realize that Mr..... is hopelessly sterile, though not impotent, adequate laboratory tests having been performed, and further because we are extremely anxious to have a child and we feel that our mutual happiness and our well-being will be greatly enhanced by this Artificial Insemination.

We understand that more than one attempt at artificial insemination may be required and there is no representation on the part of Dr.....as to the number of attempts. We fully understand that Dr..... does not or did not represent or warrant that a pregnancy or full-term pregnancy will result from such artificial insemination; further, under no circumstances shall we demand that the name of the donor of such sperm be divulged.

That we release the said Dr.....of any and all responsibility in the event that the issue that may result from said artificial insemination is abnormal in any respect.

.....

.....

Witness:.....

If properly worded it would be as much a safeguard to the doctor as any form of consent customarily used in connection with surgical operations. The consent form used by the author is taken in part from that used by several different authors, with details necessary for protection under California laws.

Laws pertinent to paternity generally contain a provision to the effect that the issue of a wife cohabiting with her husband is presumed to be legitimate. Under California law this presumption (Civil Code, Section 194) is conclusive and indisputable if the husband is not impotent. This opens only two avenues to attack the legitimacy of a child born in wedlock. Although there is no agreed legal definition of the word impotent, it seems to include inability to copulate rather than inability to reproduce.

Therefore the only successful attack on the legitimacy of a child born in wedlock (or within ten months after dissolution of a marriage) must be

based on lack of proof of cohabitation or impotency of the husband.

The author feels that the ultimate trend of legislation on artificial insemination will depend primarily on the manner in which this delicate situation is handled by the medical profession. In other words, although there is nothing unlawful at present in artificial insemination as practiced by reputable doctors, the smallest lack of integrity, care or attention to the absolute requirements of such practice might easily bring about unfortunate occurrences which, with attending publicity, might well cause a revulsion of public opinion, resulting in legislation which would ban the practice entirely.

SUMMARY AND CONCLUSIONS

The number of childless marriages in the United States is constantly increasing. There are always at least 200,000 husbands who will never be able to produce offspring. Artificial insemination offers the possibility of children for the wives of this large group in our country.

There are certain prerequisites that must be strictly adhered to. Both husband and wife must understand the psychological adjustments that are necessary to assure continued marital happiness.

The methods of insemination are briefly reviewed, and the complications, especially from the use of the husband's semen, are enumerated.

Careful selection of the donor and the preservation of his anonymity is paramount.

Results show that insemination with the husband's semen is only successful in a small percentage of cases (16.6 per cent) while insemination with a donor's semen gives far better results, 52.7 pregnancies per cent.

Legal aspects are briefly reviewed, especially those pertaining to California law.

The future trend of legislation on artificial insemination depends primarily on the manner in which the situation is handled by the medical profession.

490 Post Street.

An Original Technique for Surgical Correction of Deep Paravesical Diverticula in Bad Risks

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COMPLETE vesical diverticulectomy can be a formidable operation. Fortunately, many diverticula empty with the bladder when the obstruction is removed and operation is not necessary. In other cases, in the relatively minor operation described by Young, the mucous lining may be removed and the stoma closed by an intravesical approach, using a paravesical drain.

More extensive sacs may be attacked by dividing the bladder wall down to the opening, and then mechanically stripping out the lining, leaving the fibrous wall intact. All of these procedures have the merit of avoiding exposure of the deep pelvic structures to infection and of injury to the ureters, the vas deferens, and the rectum, large vessels and nerves. Some diverticula have long harbored infection or stone, and the lining is so adherent and inaccessible as to be extremely difficult to remove. In such cases the tedious and hazardous operation of total diverticulectomy has been done and the mortality is very considerable. This procedure may nevertheless be necessary if the ureter empties into the diverticulum, and its opening cannot be transplanted by Young's plastic operation; or, if there is a tumor in the diverticulum. Inadequate drainage in such cases may necessitate a perineal drain.

The patient should be well prepared by proper water balance, drainage, urinary antiseptics, protein fortification, and attention to the cardiovascular system. Draining the bladder does not necessarily drain the diverticulum. In preparing infected diverticula with an accessible stoma, the author has inserted into it a panendoscope, and, withdrawing the telescope, passed a catheter into the bladder as an outflow. Both are secured. A constant, rapid drip of a mild antiseptic will clear up a foul diverticulum, which bladder drainage alone will not do.

On any prostatic service there are many patients handicapped by cardiac or renal insufficiency, obesity, senility or general weakness, some of whom have deep paravesical or subvesical diverticula, difficult of access, in which sufficient dissection, even to adequately strip the lining, is too dangerous. In such cases the procedure applied in the case cited may be lifesaving. The author has not seen it described.

CASE REPORT

Nine months before admission to the Los Angeles County General Hospital, the patient had entered another hospital for increasing dysuria, dyspnea and edema. That hospital's record showed the patient had had a benign prostatic obstruction, 1,000 cc. of heavily infected residual urine, stones in the bladder and in a huge diverticulum. The stones were removed by suprapubic cystotomy and a drain was left in. This was irrigated daily. After a stormy convalescence the patient's health greatly improved, although the infection remained. He might have continued as he was indefinitely had he not been seized by an acute upper abdominal colic with jaundice. This brought him to the Los Angeles General Hospital. The gallstone apparently passed and the jaundice cleared. The patient had been taking digitalis since his last operation and still had some dyspnea and edema. He was treated on the medical service six weeks and showed great improvement. He was then transferred to the Urology Service with the medical diagnosis of cholecystitis with stones, obesity, emphysema, and arteriosclerotic heart disease.

The treatment and rest had improved the patient's condition and it seemed possible to consider some relief of the inconvenience of the tube and the imperfectly draining diverticulum with consequent intractable infection.

Roentgenographic examination was negative for stone in the bladder and kidneys. The phenolsulphonephthalein test was 5-20-20 per cent, the non protein nitrogen 27 mg. per cent. The urine showed many pus and red blood cells, microscopically. Smears showed Gram positive cocci and Gram negative bacilli. There seemed to be no urea splitting organisms. The kidneys were not tender. The prostate was smooth, firm, and of moderate size. Reflexes were normal, and the Wassermann and Kahn tests negative. The heart was enlarged to the left, but the electrocardiogram was negative. The medical consultant approved operation.

On August 22, 1940, under spinal anesthesia, the suprapubic wound was re-opened, and the bladder freed. The prostate was firm and avascular. The diverticulum was larger than the bladder, extending deep into the pelvis. Its opening was halfway down the wall on the left and barely admitted a finger. There was no evidence of a tumor in the bladder or diverticulum, and there were no stones. The bladder wall was divided down to the stoma as Barnes described, and the mucosa of the diverticulum stripped for 3 cm. about the opening. It was densely adherent. Mechanical stripping of the entire sac seemed to entail too much risk for the patient. Therefore, it was decided to sclerose the lining of the sac. At the top a very small opening was made and a Pezzer catheter drawn up through it and out a stab wound in the abdominal wall, lateral to and separate from the cystotomy. The diverticulum was then separated from the bladder and closed. The prostate was enucleated with very little bleeding and the bladder closed in three layers about a drainage tube. The wound was closed with both tubes secured to the skin. The diverticulum was then irrigated with 10 per cent silver nitrate solution, which after five minutes was washed out with normal salt solution. The patient left the operating table in good condition.

A note on the operating sheet states: "This method was used because the diverticulum was extensive and deep in the pelvis; and the previous reaction to surgery made us question whether he would survive a complete diverticulectomy."

On the fourth day the diverticulum was irrigated with 10 per cent silver nitrate solution, followed by normal saline, and on five successive days with 2 per cent silver nitrate and saline. On the 12th postoperative day the Pezzer catheter was removed and a smaller tube inserted, which was gradually shortened and removed as the sac was obliterated. Convalescence was smooth and practically afebrile. The patient was discharged on the 19th day, voiding well and with the bladder wound closed. When seen in clinic one and two months later there was no discomfort. The wounds were healed.

Nearly five years later the patient began to have burning urination and, later, bleeding. He returned to the Los Angeles General Hospital five years and three months after the operation there with a clinical diagnosis of cancer of the bladder. Death followed soon, without cystoscopic or autopsy confirmation of the diagnosis.

SUMMARY

Obliteration of deep vesical diverticula in patients who are poor surgical risks, may be done with sclerosing fluids, by separating the bladder completely from the diverticulum, giving each an independent drain to the surface.

A Therapy of Proved Efficacy in Otomycosis

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AMONG the otolaryngological problems encountered in the South Pacific, preponderant by far were cases of otitis externa, commonly grouped and referred to as otomycosis. In fact, these cases represented a large percentage of all medical problems in this area, as has been confirmed by verbal reports from medical officers of ships and of many shore activities. Advice as to therapy was requested frequently by medical officers on independent duty, and the fact that the therapeutic procedures that have been suggested are so numerous and widely varying has prompted this delineation of a simple and uniformly successful method of treatment.

During 20 months at a naval base hospital in the South Pacific, the author observed 4,610 cases of otomycosis in the eye, ear, nose and throat clinic. This was about 25 per cent of the total number of new out-patients in the clinic during this period. Many of the patients, perhaps 60 per cent, presented themselves for treatment, or were referred, only when there was a secondary acute external otitis superimposed on the mycotic infection; and in about half of them, peri-auricular adenopathy was present. Frequently there was the additional complication of a marked regional dermatitis. In 90 per cent of these cases, there was a history of swimming shortly preceding the first symptoms of pruritus and slight serous discharge.

One of our earliest observations was that patients with otomycosis treated according to the methods then in vogue at this particular location, and pronounced cured, would almost invariably return in three to five weeks with a "recurrence"; and the records showed that this had been rather consistently true in the past. This, coupled with the elicited fact that there had usually been no further swimming in the interim, led to the obvious conclusion that the therapy was incomplete.

Treatment had consisted of the insertion in the auditory canal of a cotton pledget soaked in Cresatin (metacresylacetate), which was replaced after 24 hours with a similar pledget. Inasmuch as this preparation, left in place, frequently caused a dermatitis after 48 hours, the pledget was withdrawn at the end of that time and thereafter the canal was painted daily with the medication, until the acute inflammation and swelling had disappeared and there was no further discharge. The patient then was dismissed as cured.

Bacteriological examination of the exudate at the acute stage revealed a mixed flora of bacteria with staphylococci predominating, and particularly, numerous unidentified large Gram positive bacilli, frequently occurring in chains.

Findings interpreted as evidence of otomycosis were actually the result of this Gram positive bacillus, and treatment which overcame this infection was considered to have cured otomycosis. The fact that a few patients were permanently relieved following this treatment indicated that they had had a bacterial otitis externa, without mycosis. (During the subsequent 20 months, herein reported, there were only 147 such cases.)

When the fungus was present, it was temporarily overgrown by the bacteria, and, being untouched by the medication used, needed only a sufficient lapse of time to develop further and recommence the cycle. The "recurrences" meant that the sub-epithelial mycotic spores, unattacked, grew and produced over and over the clinical condition of otomycosis, which in turn, due to epithelial maceration and desquamation, predisposed to repeated bacterial invasion. The pain accompanying the resultant acute external otitis brought the patient back for treatment.

From these observations it was deduced that the therapy must be planned for and directed at two distinct phases: (1) the secondary acute external otitis and its complications; (2) the underlying mycosis.

In either phase, meticulous cleansing of the ear canal is an absolute prerequisite. It is certain that no medication introduced into the canal will be efficacious if exudate, epithelial scales, and debris are allowed to remain. And yet it has been observed repeatedly that the lack of complete cleansing has spelled the difference between success and failure in the handling of this problem. This stems often from the fear of using water in the canal because "fungi grow in the presence of moisture." Actually there is no way to cleanse such a canal except by copious lavage, using the large metal ear irrigating syringe, and there is *absolutely no danger* in this procedure if the canal is carefully and thoroughly dried subsequently. This bespeaks proper lighting, proper, small, delicate cotton-carriers (the piano wire type is best) and, above all, patience. At times, the cleansing of a neglected ear canal will require as much as 20 minutes, and he who has not sufficient patience to carry out this aural hygiene completely is doomed to failure.

THERAPY OF ACUTE EXTERNAL OTITIS

Adequate treatment of the acute external otitis varies with the extent of involvement. With moderate inflammation and minimal swelling of the canal wall, the insertion of a cotton pledget covered with 5 per cent sulfathiazole ointment, replaced with a similar pledget after 24 hours, suffices. The pledget is rolled individually for each case, as it must fill the canal without causing painful pressure. For ease and tidiness in handling, and for prevention of waste and rancidity, the sulfathiazole ointment is kept in a 20

cc. glass syringe and squeezed on the pledget by means of the plunger, as needed. The ointment has a petrolatum base which can be thinned if necessary by the admixture of liquid petrolatum.

If the swelling of the canal is marked, if there are furuncles forming, or if there is peri-auricular adenopathy, an x-ray treatment of 75 r is given. If improvement is not prompt, the X-ray exposure is repeated after 24 or 48 hours. This is an extremely effective mode of treatment when properly used. Occasionally, in neglected cases, the adenopathy is extreme and the temperature elevated, and it is advisable to supplement the above treatment with intensive sulfathiazole administration internally, taking the usual precaution of regular checks of blood count and microscopic examination of the urine for sulfa crystals.

Whatever the degree of involvement, and however extensive the treatment, the sulfathiazole ointment wick is used, the patient is cautioned to leave it in place for the physician to remove in 24 hours, and codeine or morphine is ordered as needed. It must be remembered that acute external otitis is extremely painful. In fact, there is no *acute* external otitis without pain, although it varies in intensity and sometimes can be elicited only by pressure on the tragus or manipulation of the auricle. In addition to the benefit of rest and sleep, the anodyne will make the patient more willing to cooperate and to leave the medication in place.

In some cases there is an extensive dermatitis involving the auricle and post-auricular region. The treatment for it varies with the type and extent of the lesion. X-ray is of value, combined with the application of bland ointments (e.g. boric ointment). If it is a chemical dermatitis, it is important that the drug previously used be discontinued.

In rare instances of sulfa drug sensitivity, the sulfathiazole ointment pledget is supplanted by a Cresatin pledget, but one must be alert to detect the first sign of dermatitis from its use.

The contra-indication for the use of any colored preparation in the ear canal cannot be emphasized too strongly. From the moment that a red, or purple, or green, or yellow solution is introduced into the ear canal, it becomes impossible to follow accurately the course of the infection. Moreover, some of these dyes persist in the canal for months and can preclude the possibility of accurate diagnosis on subsequent occasions. Finally, they achieve nothing which cannot be achieved without these disadvantages.

THERAPY OF OTOMYCOSIS

When the secondary acute external otitis has subsided, treatment of the underlying otomycosis is the same as that for the uncomplicated fungus infection. The condition is characterized by itching, a "full" sensation in the ear, and, often, a serous drainage. The objective findings are moist epithelial debris, with gray or green deposits in the ear canal which float on the surface of the irrigating fluid in the catch basin. The appearance of the canal is so characteristic that, after some experience, it is unnecessary to make routine microscopical examinations, particularly since the fact that the treatment is universally effective obviates the necessity of identification of the various mycotic strains.

The canal must be irrigated in order to remove the exudate and debris, and then *completely* dried. This must be done with care and a light hand, as it is important that abrasions of the canal wall be avoided. The patient is then instructed to use as ear drops, the following prescription:

Rx

Hydrarg. Bichlor.	0.02
Alcohol	30.0
M.S. Ear drops	Use twice daily

With the prescription he is given a mimeographed slip bearing the following instructions:

DIRECTIONS FOR EAR DROPS

Use ¼ of a medicine-dropper full.
Lie on your side, with the affected ear up.
Drop medicine in the ear.
Remain in this position for two minutes, then place some cotton in the entrance of the ear, removing it after 30 minutes.
Do this morning and evening.
The drops may sting and burn at first for a minute or two, but this will not persist.

The patient is seen daily for necessary cleansing of the canal, for, again, the medication cannot be effective if debris remains in the depth of the canal. Usually, after two or three days the canal is clean, and then an interval of three days is permitted before the next visit. If there is no further exudate, the interval is lengthened to five days, and then to one week. Epithelial flakes and casts are removed at each visit. The ear drops are continued, twice daily, for at least two weeks after the canal is entirely free of exudate and debris, and then are used *twice weekly for the following month.* The last phrase is italicized because adherence to this procedure is the key to the complete cure of the fungus infection. Too often the medication is discontinued as soon as the canal appears clear. The sub-epithelial spores then develop, and there is the so-called "recurrence." In reality, the mycosis has not been completely controlled.

Under this regime, there were no "recurrences" in the 4,610 cases observed. There were a few re-infections following subsequent swimming, and several apparent recurrences without swimming, in which the patient had not continued the ear drops twice weekly for the final month, despite the instructions, because he was symptom-free. And this record in an area where climatic conditions are ideal—from the standpoint of the fungus. As all mycologists know, fungi thrive in heat and moisture, and both were present in this area—constantly and abundantly!

The patients are always cautioned against swimming. (The author has felt that possibly the mycotic spores are carried by the microscopic particles of coral, always present in the water of the area where this study was made.) Patients are also advised to protect the ear canals from the entry of water when taking a shower. And, finally, they are instructed to report for treatment *immediately* upon the occurrence of *any* symptom in the ear. When an individual

becomes conscious of an ear as a separate organ—for whatever reason—that is the time to examine it.

In this entire series of cases, there was only one instance of sensitivity to mercury, with a mild, easily controlled skin reaction. Hence this form of treatment can be considered free of danger. Furthermore, failure will be due to lack of proper cleansing, or lack of cooperation on the part of the patient, rather than to the medication.

The prescription previously given is almost universally successful in the treatment of otomycosis. The single exception is infection with Aspergillus Niger, which was extremely rare in the South Pacific but is seen somewhat more often in the United States. It is diagnosed macroscopically by the appearance of fine, soot-like particles covering the affected area, and microscopically by the characteristic mycelium, consisting of a single thallus at the end of which is a spherical spore covered with spinous processes. For this infection, the indicated prescription is:

Rx
Acidi Salicylici 0.75
Alcohol 30.0
M.S. Ear drops.....Use twice a day

The drops are used in the manner previously described, and after several days it is possible to remove desquamated epithelium in the form of a complete cast of the auditory canal and tympanic membrane. At this point the use of the drops is reduced to twice weekly, their vigorous action making it inadvisable to continue their use twice daily over a longer period.

For the "chronic" cases of otomycosis, the therapeutic principles are the same, but cleansing becomes a greater task, and there is frequently a regional eczematoid dermatitis to contend with. When it has cleared under the indicated treatment, including x-ray in some instances, the bichloride-alcohol ear drops are used as described previously, and complete recovery ensues, usually as rapidly as in the cases of recent infection.

SUMMARY

In summarizing the information gained from observation of a series of more than 4,600 cases of otomycosis, with and without complications, it is possible to list some "Do nots":

1. Do not neglect to cleanse the ear thoroughly.
2. Do not neglect to ascertain the presence of acute external otitis by otoscopy and by manipulation of the auricle and pressure on the tragus.
3. Do not treat the otomycosis until the superimposed acute external otitis has been treated and cured.
4. Do not treat otomycosis without first removing all exudate and debris.
5. Do not hesitate to use aqueous solutions for irrigating.
6. Do not neglect to dry the canal thoroughly.
7. Do not use colored preparations in the treatment of the ear at any stage.
8. Do not discontinue the prescription used for otomycosis until six weeks have elapsed following cessation of all symptoms and signs.
9. Do not presume that every ear canal containing moist debris indicates mycosis, for all is not mold that litters.

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Leprosy in Los Angeles

A Statistical Study of Seventy-Five Cases

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Leprosy has been prevalent in China and India since the beginning of recorded history. It was described in Egypt in the biblical era [8] and the disease appeared in epidemic form in Europe, England, and Scotland during and before the Middle Ages. Since the 15th Century, there has been a notable decrease in the number of people affected by the disease and it now exists only in scattered world-wide endemic foci.[9] The important endemic foci of leprosy during the past century have been in Iceland, Norway, Sweden, Africa, Asia, the Philippines, British West Indies, Central and South America, Mexico, and the United States. In the United States,[3,4,5,11] the southern Gulf states [2] (Texas, Louisiana and Florida) and California are at present considered to be the principal foci of endemic leprosy. In California the disease as it has appeared during the past 50 years can be traced to importation by immigrants from Mexico, Asia, the Philippines, and Hawaii. The importance of California as an American endemic focus of leprosy is shown by recent statistics published by the National Leprosarium.[5] These figures show that 132 patients with leprosy were admitted to the leprosarium from this state between 1928 and 1944. Forty-four, or one-third of these 132 patients, were admitted from Los Angeles City and County.

A review of the medical literature published during the past 35 years having revealed no comprehensive study of the status of leprosy in Los Angeles City and County, it is the purpose of this report to present a statistical study of 75 cases of leprosy observed at the Los Angeles County General Hospital during the 18-year period 1928-1945.

STATISTICAL STUDY OF CASES

Sex and age: There were 50 males and 25 females, with an average age of 37.1 years for the males and 43.1 years for the females. The average age for the total group was 39.1 years. The youngest patient was a 13-year-old girl, the oldest a woman 80 years of age. The distribution of patients as to age brackets is shown in Table 1. It is notable that 64 per cent of the 75 patients were between the ages of 20 and 39 years.

Nationality and birthplace of the 75 patients is shown in Tables 2 and 3.

Analysis of white American patients: An analysis of the seven white American patients in Los Angeles City and County is of especial epidemiological interest (Table 2).

From the Los Angeles County General Hospital and the Department of Dermatology of the University of Southern California School of Medicine.

Table 1.—*Ages of Leprosy Patients in Los Angeles County*

Age Group	No. of Patients
0- 9 years	0
10-19 years	1
20-29 years	23
30-39 years	25
40-49 years	8
50-59 years	10
60-69 years	5
Over 70 years	3
Total	75

Types of disease: Of the 75 patients 48 (61 per cent) had lepromatous leprosy, 17 (21 per cent) had tuberculoid leprosy, and ten (17 per cent) had leprosy of an indeterminate type.

Social status and occupation: A cross-section of the 75 cases was not a representative cross-section of the social status, wealth, education, or culture of the populace as a whole. Almost all the patients belonged to the poor foreign-born unskilled laborer class. The occupations of the group as a whole were of low rank in the employment scale. The employed women were cannery workers, domestic servants or fruit pickers. Almost all the men were laborers in the building trades, canneries, and fruit orchards. Only a few of the patients were white collar workers.

Duration of disease before admission: The duration of the disease prior to its identification, as determined by interview of the patients, varied from six weeks to 18 years (Table 4).[6] The average age of patients at the time of onset was 36 years and the average age at the time of hospitalization was 39 years.

Site and length of time of residence in Los Angeles City and County: The time of residence of 69 of the 75 patients in Los Angeles, as obtained at admission, varied from a few days (seven of the patients were transients) to 43 years (Table 5). The average time of residence was 12.2 years. A survey was made of the sites of residence of the 75 patients in Los Angeles City and County. Forty-five (60 per cent) of the 75 patients resided in Los Angeles City. Thirty patients (40 per cent) lived outside of Los Angeles City in the Los Angeles County area. Forty-one of the 45 patients residing in Los Angeles City lived in the older congested east and northeast regions popularly known as the "Mexican Quarter." The 30 patients residing in Los Angeles County

TABLE 2.—*Native White American Leprosy Patients Admitted 1928-1945 to the Los Angeles General Hospital*

Case No.	Sex	Age	Birthplace	Residence in Southern California	Occupation	Type and duration of disease	Remarks
1.	M.	70	Pennsylvania	3 years	government clerk	tuberculoid 10 years	Resided in Philippines for 35 years.
2.	M.	59	Ohio	2 months	postal clerk	lepromatous 17 years	Resided in Philippines and Cuba for many years. Was married to two Filipinas.
3.	F.	53	Indiana	3 years	housewife	lepromatous 4 years	Resided in Philippines for 2½ years, 9 years before onset.
4.	M.	23	California (Los Angeles)	23 years	foundry laborer	lepromatous 2 months	Patient associated with Filipinos at work. No other association with possible lepers.
5.	M.	26	California (Los Angeles)	26 years	plasterer	lepromatous 6 years	Stationed in Philippines as a soldier in the U. S. Army. No other association with possible lepers.
6.	M.	34	Arizona	unknown	prizefighter	tuberculoid 2 years	
7.	M.	32	Arizona	11 years	laborer	tuberculoid 5 years	

* There was one other native American patient, a Negro born in Louisiana.

TABLE 3.—*Nativity and Racial Ancestry of Leprosy Patients*

Mexicans	55
Americans (White 7, Negro 1)	8
Filipinos	6
Chinese	2
Korean	1
West Indian (Negro)	1
Yugoslav	1
Italian	1
Total	75

proper were scattered throughout 18 townships except for five patients who lived in the harbor district (San Pedro) and four who lived in Whittier (agricultural and fruit growing district).

Laboratory investigations: The results of the laboratory findings in the 75 patients (Table 6) confirmed the clinical diagnosis in 65 instances. Ten patients had "clinical leprosy" (lepromatous, two; tuberculoid, six; indeterminate, two) with negative laboratory findings. Two of these ten patients gave histories of previous admission to the National Leprosarium, from which they had been released conditionally as having the disease in an arrested form. Of the 65 patients with positive laboratory findings, in 13 (18.5 per cent) the organism could be demonstrated in smears prepared from a nodular lesion; in 38 (54.2 per cent) nasal smears showed the organism; in nine (12.8 per cent) the organism could be demonstrated by biopsy; in five cases (7.6 per cent) two or more of the various laboratory procedures carried out showed positive finding for leprosy. Nineteen patients (25.3 per cent) showed a positive serological reaction for syphilis.

Disposition of cases: The disposition made of the 75 patients is shown in Table 7. Of the ten patients (included among the 75) with the diagnosis of "clinical leprosy" with negative laboratory findings, four were paroled to their homes, two were deported to their native land, Mexico, two were transferred

TABLE 4.—*Duration of the Disease in Leprosy Patients Before Hospital Admission, as Determined From Interview.*

	No. of Patients
Less than 1 year	12
1 to 2 years	24
2 to 3 years	4
3 to 4 years	9
4 to 5 years	5
5 to 10 years	10
10 to 15 years	5
15 to 20 years	3
Total	71

TABLE 5.—*Time of Residence of Leprosy Patients in Los Angeles County Before Hospital Admission*

	No. of Patients
Less than 1 year	6
1 to 2 years	1
2 to 3 years	7
3 to 4 years	1
4 to 5 years	1
5 to 10 years	11
10 to 15 years	22
15 to 20 years	5
20 to 25 years	10
25 to 30 years	2
Over 30 years	3
Total	69

TABLE 6.—*Results of Laboratory Examinations for Leprosy*

	No. of Patients
Positive skin nodule smear	13
Positive nasal smear	38
Positive biopsy	9
Positive skin and nasal smears	1
Positive biopsy and nasal smear	2
Positive biopsy and skin smear	2
Negative laboratory findings	10

TABLE 7.—*Disposition of Leprosy Patients*

Disposition	No. of Patients
Paroled, disease arrested	3
Paroled home into quarantine, disease active	4
Transferred to National Leprosarium	44
Aliens deported to native country	12
Died	5
Absconded	7
Total	75

to the National Leprosarium, one died, and one absconded.

Cause of death: Two patients died of pulmonary tuberculosis and pneumonia, two of stenosis and ulceration of the larynx, one from an unknown cause.

Previous admission of patients to the National Leprosarium: Eleven (14.6 per cent) of the 75 patients had a history of previous admission to the National Leprosarium for periods of stay of one to ten years. Seven of these 11 patients had been discharged from the leprosarium as having the disease in an arrested state, and they had suffered reactivation of the disease. Four of the 11 patients had absconded from the leprosarium and were apprehended by the Los Angeles Health Officers for return.

Yearly admissions of lepers to hospital: During the 18-year period, 1928-1945, is shown in Table 8.

Referral sources of leprosy patients admitted to hospital: The Los Angeles City and County Health Departments referred 34 of the 75 patients; private physicians, 11 patients; private and government hospitals, four; the hospital dermatologic clinic, ten; police department, three. Thirteen patients entered the hospital voluntarily for treatment.

COMMENT

Although, geographically, the Gulf coast states of Texas and Louisiana rank as the most important endemic foci of leprosy in the United States, California is third among the states in the number of patients referred to the National Leprosarium. Hopkins and Faget [5] report that in the period 1928 to 1944 the admissions to the leprosarium from Texas numbered 183; from Louisiana, 173; from California, 132. The average number of patients admitted from California each year during this period was 8.8. This figure does not include patients from this state not admitted to the leprosarium because of deportation to their native countries, parole at home, or death. Although the Los Angeles County General Hospital in the period 1928-1945 admitted an average of 4.1 leprosy patients per year from the Los Angeles area, it referred only 58.9 per cent of the total 75 cases to the National Leprosarium because of the exceptions noted. Otherwise the yearly average of admissions to the leprosarium from California would be higher than the reported 8.8 patients per year.

The principal source of new leprosy patients in Los Angeles City and County during the past 18 years is shown by this study to be the relatively large foreign-born Mexican population. Fifty-five (73.5 per cent) of the 75 patients in this report were Mexicans of foreign birth who gained access to Los Angeles City and County by immigration from Mexico where the disease is common. Leprosy in Mexico has recently been described by Perlman and Huffman.[10] Latapi,[6] in an interesting personal communication to the authors, states that the number of lepers in Mexico according to an official survey is 8,177. He considers this number too low and states that the actual number of lepers in Mexico is conservatively estimated to be about 20,000. The three main foci of leprosy in Mexico, according to Latapi, are in the west (states of Sinaloa, Jalisco, Nayarit, Michoacan, Colima, Guanajuato), northeast (states of Coahuila, Nueva Leon), and the Yucatan peninsula. Baja California and Sonora have few lepers and the eastern coast is free of the disease. Many lepers, however, are seen in Mexico City in the Dermatology Service of the Hospital General. During 1944, this clinic found one leper in every 37 dermatological patients, and 169 new cases were seen in the Leprosy Dispensary in Mexico City. Seventy-one (42 per cent) of these 169 new cases in Mexico City were discovered in public health

TABLE 8.—*Yearly Admissions of Leprosy Patients to the Los Angeles County General Hospital 1928-1945*

Year	No. of Patients	Year	No. of Patients
1928	6	1937	6
1929	3	1938	5
1930	5	1939	4
1931	6	1940	4
1932	7	1941	2
1933	2	1942	3
1934	4	1943	2
1935	5	1944	6
1936	2	1945	3
		Total	75
		Yearly average	4.1

dermatology clinics. Latapi reports leprosy to be slowly and continuously increasing in Mexico, where the disease presents a very difficult government problem. Denney [2] considers endemic leprosy in Mexico to be due to some inherent faction which renders its populace more liable to develop the disease. Denney's opinion is supported by Hopkins and Faget's figures [5] on the racial ancestry of patients admitted to the National Leprosarium from 1928 to 1944. These statistics show that Mexicans were first on the racial list, accounting for 212 of 723 admissions.

Due to the long incubation period of leprosy or to the slight early clinical manifestations, lepers who are immigrants from Mexico pass the examination of the border immigration officers and enter Southern California. Because of agreeable climate and agricultural employment inducements, the Los Angeles area is selected by most Mexican immigrants as a favorable residential site.* The residential sur-

* A personal communication from the Mexican Consulate in Los Angeles reveals an estimate of 300,000 Mexicans (100,000 foreign-born, 200,000 native-born) residing in Los Angeles City and County in 1944.

vey of lepers admitted to the Los Angeles County General Hospital shows that approximately two-thirds of these patients were admitted from the "Mexican Quarter" in the eastern and northeastern sections of Los Angeles City. Discovery and segregation of lepers can result in the eventual eradication of this focus. A barrier to the discovery of new cases, however, is that many victims, although knowing they have the disease, forego medical aid for fear of discovery. Others, known lepers, "hide out" and expose their relatives and neighbors to the disease for years. A description of "the average leprosy patient" in the community, as disclosed by this statistical study may help physicians in the Los Angeles area to discover new leprosy patients. The "average leprosy patient" is a foreign-born Mexican laborer in his 20's or 30's who resides in the east or northeast sections of Los Angeles City. He is apt to exhibit a papular or nodular eruption, often hyperpigmented. As there was positive reaction to Wassermann tests in 19 of our 75 patients, a positive blood serologic reaction in a foreign-born Mexican with cutaneous papular or nodular lesions should bring to mind the diagnosis of leprosy as well as syphilis.

No information was available in our study as to the presence of leprosy in siblings of patients but future investigations may disclose second generation cases. Information as to patient contacts may be difficult to obtain, however, because of the known reluctance of lepers to involve relatives or friends in giving a contact history. Denney, in discussing papers by Lehman and McCoy,[7] expressed the belief that the incidence of leprosy among Mexicans in Texas is six times as great as it is in Caucasians. Our statistics show that in Los Angeles City and County, incidence among Mexicans is eight times greater than in native white Americans. Although the immigrant Mexican population in Los Angeles increased sharply during the recent war years as a result of attractive employment conditions, the concomitantly increased health hazard to the general populace of this community as regards leprosy may not be further evident for years, because of the long incubation time of the disease.

Foreign-born lepers, other than Mexicans, in Los Angeles City and County have usually been natives of the Philippines and China. These two racial groups are relatively small in population compared to the Mexicans, and together accounted for only 10 per cent of our 75 cases. During 1928-1945, 22 lepers residing in other California counties were admitted temporarily to the hospital en route to the National Leprosarium. A comparison was made of the percentage of Mexican lepers in this group to Mexican lepers admitted from Los Angeles County. Only 27.2 per cent of these 22 patients were Mexicans, while 73 per cent of the lepers from Los Angeles County were Mexicans.

Of the seven native white Americans admitted from Los Angeles City and County (Table 4), four had lived, for varying periods, in the Philippines. As considerable numbers of American troops and civilians were stationed or were held prisoner in Asia, Hawaii and the Philippines during the recent war, a possible source of new infection in the United States is indicated. Hopkins and Faget's statistics on leprosy in the military service after the Spanish-American War [5] show that "at least a small number of those who served in the countries where leprosy is present will become its victims." Because of its long incubation period, leprosy may not appear clinically in susceptible exposed American civilians and World War II veterans for five to fifteen years. Therefore, physicians in the United States may encounter the disease more frequently in the next two decades.

There is no indication from this study that the number of yearly cases of leprosy discovered in Los Angeles City and County is on the increase. The disease remains at a relatively low level despite the sharp increase in population in this area during the 18-year period 1928-1945,* including an increase of at least 100,000 in the number of Mexican residents. However, in this respect it should be noted that the greater part of the upturn in population has been due to migration of native white Americans from states where leprosy is not endemic.

Two common axioms among students of leprosy are: "As many lepers are at large in the populace as are in institutions." and. "Look for another leper in a leper's home." Unless the small endemic focus in the Los Angeles area is eradicated, leprosy may in the course of years become prevalent among native born descendants of resident afflicted immigrants. A similar situation existed in Louisiana during the last half of the 18th Century when leprosy was introduced into that state by the immigrant Acadians from Canada. Many cases of leprosy in Louisiana today can be traced back to leprous Acadians.

SUMMARY AND CONCLUSIONS

A statistical study is presented of 75 cases of leprosy observed at the Los Angeles County General Hospital from 1928 to 1945.

Leprosy in Los Angeles City and County exists as a small persistent endemic focus that is primarily due to importation of the disease by foreign-born Mexicans from Mexico.

The possibility of spread of leprosy to Caucasians residing in Los Angeles City and County is indicated by the fact that one of the seven white American patients in this study was a native of this area and had always lived here.

The majority (91 per cent) of leprous patients discovered in Los Angeles resided in the older east and northeast areas of the City ("Mexican Quarter"). Physicians and clinics attending Mexican patients residing in the "Mexican Quarter" can help eradicate the disease by being alert to recognize and segregate those who have it.

The presence of leprosy in four white Americans

* The total population of Los Angeles County has increased from 2,400,000 in 1930 to 3,500,000 in 1945 (45.8 per cent) according to United States Census Bureau estimates.

in this study who probably contracted the disease in the Philippines indicates that other cases may develop later (due to the long incubation period) in at least a small percentage of the American war veterans and civilians who were stationed or imprisoned in Pacific areas where leprosy is endemic.

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REFERENCES

1. Aycock, W. L.: Familial susceptibility as a factor in propagation of leprosy in North America, Internat. J. Leprosy, 8:137 (April-June), 1940.

2. Denney, O. E.: Leprosy in the Southern United States, The Southern Med. Jour., 26:763, 1933.

3. Hoffman, F. L.: The leprosy situation in the United States in 1923, J.A.M.A., 83:1707, 1924.

4. Hopkins, R., and Denney, O. E.: Leprosy in the United States, J.A.M.A., 92:192, 1929.

5. Hopkins, R., and Faget, G. H.: Recent trends of leprosy in the United States, J.A.M.A., 126:937-943, 1944.

6. Latapi, Fernando, Professor of Dermatology at the National University, Mexico City, personal communication.

7. Lehman, C. F., and McCoy, G. W.: The spread of leprosy in the United States, Arch. Derm. & Syph., 37:169, 1938.

8. McEwen, the Biblical World, The Leprosy of the Bible in its Medical Aspects, No. 3 and No. 5, 1911.

9. Muir, E.: Handbook on Leprosy, page 6, R. J. Gundy Co., 1921.

10. Perlman, H. H., and Huffman, M. R.: Highlights of the conference in tropical dermatology for American doctors at Mexico City, August 6-18, 1945, The Urol. and Cut. Rev., 50:219-237, 1946.

11. Pollitzer, S.: Historical sketch of leprosy in the United States, Jour. Cut. Dis., 29:261, 1911.

The Surgical Treatment of Mixed Tumors of the Parotid Gland

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THE treatment of mixed tumors of the parotid gland is a subject which has always provoked a great deal of thought and study, and as a result many different plans of surgical attack have been proposed in an attempt to eradicate the tumor. The average recurrence rate given in the literature is approximately 25 per cent, which is an indication that surgical procedures employed in the past have not been sufficiently radical. The presence of the facial nerve within the parotid gland has undoubtedly been the chief factor responsible for inadequate excision. Recently, however, more radical operative procedures have been advocated, with corresponding improvement in the recurrence rate. These newer procedures vary from simple excision with a wide margin, after isolation of the nerve, to complete parotidectomy with or without preservation of the nerve. It is our impression that the majority of mixed tumors are still being removed by simple enucleation. We feel the procedure of choice is radical excision of the tumor with isolation and preservation of the facial nerve.

A review of the natural history of these tumors is revealing. Chen and Loucks[6] in China have indicated that many patients go along for years without any particular difficulty other than the unsightliness of the tumor. Their illustrative photographs show the tremendous size these tumors may attain. Most patients would not be satisfied to allow the tumors to reach these proportions.

The undesirable results reported in the literature seem to arise in patients who are treated inadequately at the time of the first operation. Recurrences give rise to serious complications. McFarland[10] had in his series 13 patients who died as a result of complications arising from the recurrence of a mixed tumor. These complications were ulceration, hemorrhage or infection, and in rare instances metatases. Once a tumor has been disturbed, it may grow very rapidly and in many instances develop local malignant changes. The inference, then, is that when and if we treat these patients surgically we must do so in a radical manner. We have our best opportunity to produce a permanent cure at the time of the first operation.

REASONS FOR RECURRENCES

Mixed tumors are usually well encapsulated; although, as Trueblood[16] has emphasized, the capsule is not a true capsule, but really compressed normal tissue. Although the capsule may be well defined in some areas, tumor cells may extend into it, and perhaps immediately beyond. There may be seedling tumors just adjacent to the primary tumor. Frequently the tumor is gelatinous and soft, and consequently some difficulty may be encountered in handling it without rupture of the capsule. From the pathological standpoint, no completely reliable microscopic features are found in mixed tumors to indicate the true nature of the tumor or its tendency to recur.

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Read before the sections on General Surgery, Industrial Medicine and Surgery, and Neuropsychiatry at the 76th Annual Session of the California Medical Association in Los Angeles, April 30-May 3, 1947.

The average incidence of recurrence given in the literature is about 25 per cent. It is impossible at present to arrive at any complete conclusions in regard to the expected recurrence rate following any type of surgical procedure, because these tumors may recur at any time over a period of years. Some have recurred as late as 30 to 40 years after operation. However, a few deductions can be made from statistics given in the literature.

Enucleation or local excision without visualization of the facial nerve: Stein and Geschickter [14] indicate a 100 per cent recurrence in seven cases treated by incision and curettage, 57 per cent recurrence after enucleation in 21 cases, and 13 per cent recurrence after removal with a cuff of normal tissue in 83 cases. McFarland reported a recurrence rate of 23.2 per cent in 297 cases on which data were gathered over the years from different hospitals in Philadelphia. Most of these patients were probably treated by simple enucleation without visualization of the facial nerve. The recurrence rate was 30 per cent in Wood's [17] series. This is an older series and the patients were treated with local enucleation. Swinton and Warren [15] from the Lahey Clinic report a recurrence rate of 4.3 per cent in their operative procedure of local excision. Twenty-eight of their total of 51 cases, however, were followed for three years or less from the time of operation. Their longest follow-up period was nine years. Permanent facial nerve paralysis was present in 10 per cent of these cases. In Houck's [7] series of 25 patients treated with wide local excision, the recurrence rate was 4 per cent. Eleven cases were followed for eight years, and nine cases for ten years. The follow-up was much shorter in the remaining cases. The incidence of partial or complete facial palsy in this group was 20 per cent. This might have been lowered if the facial nerve had been visualized and dissected free of the surrounding structures.

At the University of California Hospital, 76 patients with mixed tumors have been operated upon in the past 20 years. Fifty-six cases have been followed from one to 20 years, and 28 cases for less than five years; there has been a recurrence rate of 16.6 per cent. These patients were treated by several different surgeons, primarily with simple enucleation or local excision. In more recent years, some operators have isolated the nerve, in larger tumors, and hence preserved it.

Surgery combined with pre-operative and post-operative irradiation: Patey [11] has reported 20 cases in which enucleation of the tumor was followed by routine postoperative irradiation. The follow-up here was from two to 12 years, with a recurrence rate of 5 per cent. Ahlbohm [2] reports that at the Radiumhemmet in Stockholm, Sweden, pre-operative and postoperative irradiation is used in conjunction with operation except in the smaller, more superficial tumors, where excision alone is performed. Hybbinette,[8] who has operated on most of these patients, states that the capsule is toughened by pre-operative irradiation and this facilitates removal. In deep-lying tumor the capsule is opened and the contents evacuated. Then, with one finger inside the capsule, it is dissected free of the surrounding gland, care being taken to protect the nerve. Radium tubes are used locally in the cavities of the excised tumors. During the years 1910 to 1932, 120 mixed tumors were treated. At the end of two years, there were four recurrences, an incidence of 3 per cent. There was at least a five-year follow-up of 52 patients, with recurrence in three, or 6 per cent.

Partial or total parotidectomy with sacrifice of the facial nerve: Singleton and Duren [12] advise radical excision of mixed tumors of the parotid gland, with no attempt to preserve the facial nerve when the tumor is "the size of a lemon" or larger. Their recurrence rate was 8.7 per cent in 23 cases. The follow-up in these 23 cases varied from three years to 24 years. However, in excising smaller tumors they advise isolation and preservation of the nerve. The facial nerve was sacrificed in only ten of the 23 cases.

Total parotidectomy with preservation of the facial nerve: Bailey [3] and Trueblood advise total parotidectomy and preservation of the facial nerve. Bailey reported only a few cases, and the recurrence rate was not stated. Trueblood appears to have had good results, in that he performed total parotidectomy on 16 patients from 1932 to 1944, and reported no recurrences and no facial palsy.

Radical local excision with dissection and preservation of the facial nerve: Janes,[9] in 1943, and Burch and Fisher,[5] more recently, have advocated identification, dissection, and preservation of the facial nerve, followed by wide local excision of the tumor. Burch and Fisher locate and identify the inframandibular branch of the facial nerve and dissect on upward toward its origin. Their cases are too recent to be of statistical value in regard to recurrences. Janes approaches the main trunk of the facial nerve as it emerges from the stylomastoid foramen. He has operated on 25 patients in this manner during the past nine years. Twenty-one of these patients have shown no recurrence; the other four cases are untraced.

RADIATION THERAPY

It is generally accepted by the majority of writers that radiation therapy alone is inadequate in the treatment of mixed tumors. It is our impression, however, that in the cases reported in the literature the doses were variable and usually inadequate. Some authors, such as Bailey, Ahlbohm, Hybbinette, and Bell,[4] have used radiation therapy pre-operatively. They feel that radiation toughens the capsule and in some instances reduces the size of the tumor so that it becomes more freely movable; hence, use of radiation before surgery may be of some value. It is the feeling of the Department of Radiotherapy of the University of California Hospital that the doses given must be large, ranging up to 4,000 to 5,000 r. Operation can then be performed six to eight weeks later without danger to the skin. The therapy, however, is unpleasant, and should be used only on large tumors.

INDICATIONS FOR OPERATION

With one exception, any tumor of the parotid gland should be removed. When one considers the natural history of the tumor, it is apparent that should a tumor that grows very slowly appear in an individual whose life expectancy is short, one would be justified in observing its growth. In other cases, however, operation should not be delayed. We do not subscribe to the theory of McFarland that, because in his series the recurrence rate was less in "lemon-sized" tumors, all tumors should be allowed to reach this size before removal. Furthermore, differentiation between benign and malignant tumors is not always possible. Although rapid growth and fixation are suggestive of malignancy, a positive diagnosis cannot be made until the tumor is analyzed microscopically. There can be no doubt that the slow growth of the tumor and the hazard of a facial paralysis have been the chief factors in delaying surgical treatment.

TECHNIC OF OPERATION

A general anesthetic should be used. A small button-hole incision made under local anesthesia is one of the causes of inadequate removal of the tumor. We have used an intra-tracheal tube, which allows proper draping of the wound without interference with the anesthetist.

The incision originally advocated by Sistrunk[13] in 1921 is to be preferred. It is advisable to mark this incision before the patient's head is extended and turned to the side. The incision starts over the mastoid process behind the ear and continues along the skin folds, passing just posterior to the angle of the mandible and extending into the neck for about an inch. This line corresponds approximately to the anterior margin of the sternomastoid muscle. If the tumor is small and located in the lower half of the gland, this incision is adequate. However, when the mass is deep or in the upper portion of the gland, it is necessary to make a supplementary incision (Figure 1) beginning in front of the tragus of the ear and passing inferiorly around the lobule of the ear to join the original incision, as advocated by Adson and Ott.[1]

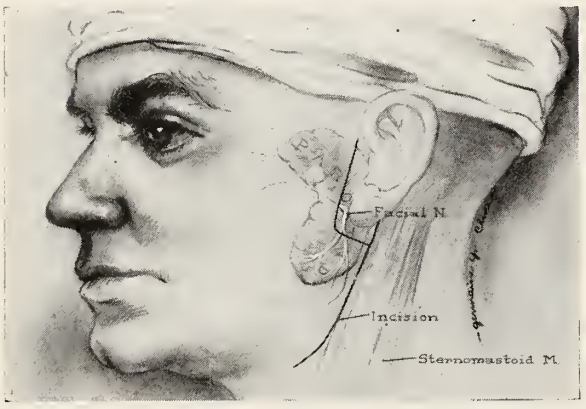


Figure 1.—The incision starts over the mastoid process and follows the skin folds just posterior to the mandible. For larger tumors and those involving the superior portion of the gland, an additional incision is made beginning in front of the ear and curving posteriorly just inferior to the lobule.

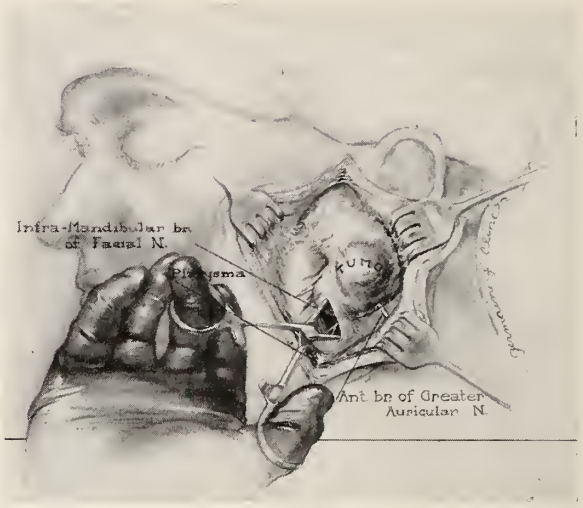


Figure 2.—The capsule of the gland is continuous with the fascia overlying the facial muscles and the sternomastoid muscle. The inframandibular branch of the facial nerve is most satisfactorily isolated just deep to the fascia inferior to the gland, about ¼ inch posterior and inferior to the angle of the mandible.

The incision is developed down to the fascia overlying the gland, which forms the capsule of the gland and is continuous with the fascia over the sternomastoid muscle, the fascia overlying the facial muscles, and the superficial layer of the deep cervical fascia. In the region of the angle of the mandible and inferiorly, the platysma is encountered and must be divided before the fascia is exposed. The skin flap is then dissected medially over the gland, this being a rather tedious process because of the vascularity and the presence of numerous fascial bands between the skin and the capsule of the gland. The anterior branch of the greater auricular nerve, which will be seen piercing the capsule in the posterior inferior aspect of the gland, should be preserved if possible. The fascia along the anterior margin of the sternomastoid muscle is next incised, and the posterior aspect of the gland is exposed.

At this stage of the operation one can isolate either the main trunk of the nerve or one of its peripheral branches. The inframandibular branch is the most accessible, and its transaction will result in the least amount of facial deformity. After leaving the stylomastoid foramen, the facial nerve passes through the substance of the deep lobe of the parotid, then divides into its two main branches, the cervico-facial and temporo-facial, which enclose the isthmus and fan out to lie deep to the superficial lobe. The main trunk is located as it passes into the substance of the deep lobe just beyond the styloid process which can be identified with the palpating finger.

The inframandibular branch is located about one-quarter inch inferior and posterior to the angle of the jaw beyond the limits of the gland (Figure 2). It is usually accompanied by a small artery and vein and can be readily identified by using an electrical

nerve stimulator.* With the use of this stimulator, the anesthetist can detect any contracture of the facial muscles. After the nerve has been isolated, it can be followed quite bloodlessly, since this nerve and its branches lie on the masseter muscle deep to the gland, rather than within the substance of the gland as is generally supposed. Having freed the gland posteriorly, one can mobilize the superficial lobe (Figure 3) as the inframandibular branch is traced to its junction with the main cervical branch and its subsequent branches to the upper lip and nose. In many cases it will not be necessary to free the gland beyond that portion which contains the main trunk of the facial nerve, since many tumors are located in the inferior half of the superficial lobe. Partial resection of the gland can now be accomplished without fear of injury to the facial nerve (Figure 3). The tumor mass is removed with an intact margin of glandular tissue and is never actually visualized.

We prefer to ligate vessels within the gland with very fine catgut rather than non-absorbable suture. If the tumor is very large and vascular, it is advisable to ligate the external carotid artery before the major portion of the dissection is started. The wound is closed by approximating the subcutaneous fat with fine cotton. The skin is closed with a very fine continuous atraumatic suture of horsehair, caldermic, silk, or cotton. To minimize the postoperative edema, pressure is maintained over the wound by applying a large dressing. Hospitalization is necessary for only two to three days after the operation. Temporary facial paralysis or paresis is commonly due to the manipulation of the nerves, and the return of function usually is noted in a few days, although in some patients it may take several months. Postoperative fistulae, which occur rarely, usually close spontaneously.

In our experience with the use of this operative procedure in eight patients we have seen no facial paralysis nor parotid fistulae. These cases are too recent for significant follow-up regarding recurrences, although there have been none as yet.

CONCLUSIONS

1. The various methods of treatment of mixed tumors of the parotid gland have been reviewed.

2. All mixed tumors of the parotid gland should be removed, except slowly growing tumors in people with a short life expectancy.

3. Mixed tumors of the parotid which are undisturbed may be relatively innocuous, but recurrences are the source of serious complications; hence the original operation must be adequate.

4. Radical local excision with visualization and preservation of the facial nerve is the treatment of choice.

* The nerve stimulator consists of a dry cell battery connected to an inductorium which increases or decreases the voltage as needed. The cord and pencil tip which transmit the current are sterile and hence available for stimulation of suspected nerve tissue.

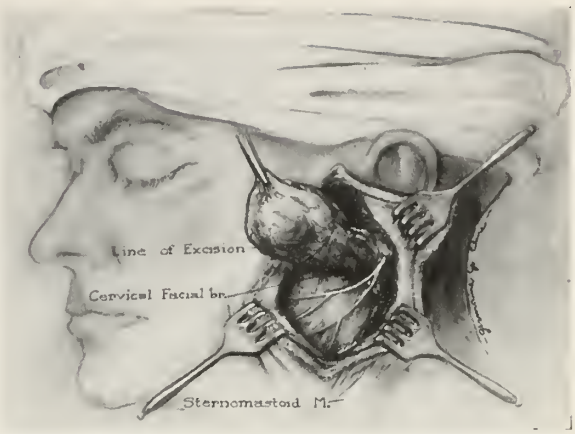


Figure 3.—After the gland is freed posteriorly, it can be mobilized as the nerve is dissected toward its origin. The tumor can then be excised safely with a wide margin of normal glandular tissue.

REFERENCES

1. Adson, A. W., and Ott, W. O.: Preservation of the facial nerve in the radical treatment of parotid tumors, Arch. Surg., 6:739-746 (May), 1923.

2. Ahlbohm, Hugo E.: The treatment of salivary gland tumors, in: Treatment of Cancer and Allied Diseases, ed. by Pack and Livingston, Vol. 1, New York, London, P. B. Hoeber, 1940.

3. Bailey, Hamilton: The treatment of tumors of the parotid gland, with special reference to total parotidectomy, Brit. J. Surg., 28:337-346 (Jan.), 1941.

4. Bell, H. Glenn: Personal communication.

5. Burch, John C., and Fisher, Herbert C.: The problem of parotid tumors, S. Clin. North America, 26:489-494 (April), 1946.

6. Chen, H. I., and Loucks, H. H.: Composite tumors of salivary glands; clinico-pathologic study of 45 cases, Chinese M. J., 47:138-153 (Feb.), 1933.

7. Houck, Joseph: Tumors of the salivary glands, Surgery, 6:550-564, 565-584 (Oct.), 1939.

8. Hybbinette, Samuel: Cited by Ahlbohm.

9. Janes, Robert M.: The treatment of tumors of the salivary glands by radical excision, Canad. M.A.J., 43:554-559 (Dec.), 1940.

10. McFarland, Joseph: The mysterious mixed tumors of the parotid salivary glands, Surg., Gynec. & Obst., 76:23-34 (Jan.), 1943.

11. Patey, David H.: Treatment of mixed tumors of the parotid gland, Brit. J. Surg., 28:29-38 (July), 1940.

12. Singleton, Albert O., and Duren, Norman: Tumors of the salivary glands, Texas State J. Med., 36:784-792 (April), 1941.

13. Sistrunk, W. E.: Tumor of the parotid gland, S. Clin. North America, 1:1515-1521 (Oct.), 1921.

14. Stein, I., and Geschickter, C. F.: Tumors of the parotid gland, Arch. Surg., 28:492-526 (Mar.), 1934.

15. Swinton, Neil W., and Warren, Shields: Salivary gland tumors, Surg., Gynec. & Obst., 67:424-435 (Oct.), 1938.

16. Trueblood, Donald V.: Clinical observations and surgical experiences with parotid tumors, West. J. Surg., 52:109-118 (Mar.), 1944.

17. Wood, F. C.: The mixed tumors of the salivary glands, Ann. Surg., 39:57-97 (Jan.), 207-239 (Feb.), 1904.

A Review of Common Ocular Problems in Children

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TO make an estimation of the relative frequency of eye disorders, the records of 1,941 consecutive patients 16 years old and younger were reviewed. The children were seen for 2,432 ocular complaints. The cases were divided into refraction problem, external disease, intraocular disease and abnormality of the extraocular muscle balance.

The refraction problems were classified according to the chief complaint or principal reason for which the pediatrician or parents requested an eye examination. The chief complaints were blurred vision, eye strain, headache, squint, conjunctival injection, blepharitis or recurrent stys. Some parents were concerned because the child assumed peculiar positions when reading or had unusual difficulty in learning to read. For these complaints 1,244 refractions were done with the eyes under the influence of 0.25 per cent atropine, or 0.20 per cent scopolamine, or 5.0 per cent homatropine. The atropine was used for children of five years or younger; the scopolamine for those of six to twelve inclusive, and homatropine for those over twelve.

The criteria for prescribing glasses varied according to the child's age and the specific case. In children of four and under, glasses were rarely prescribed unless the refractive error was at least 4 diopters of hyperopia, 2 diopters of myopia, or 3 diopters of astigmatism. In ages five to eight, 3 diopters of hyperopia, 1 diopter of myopia and 2 diopters of astigmatism were corrected. Glasses were given to children nine to twelve for 2 diopters of hyperopia, 0.75 diopters of myopia or 1 diopter of astigmatism. Any child with squint received glasses to negate the influence of the refractive error unless that error was very small. A large amount of anisometropia was an indication for glasses at all ages. Of the 316 children in whom refraction was done because of blurred vision, 71 per cent actually had reduced vision or a large refractive error and needed glasses. The parents or pediatrician suspected 251 children of having squint, but squint was not present in 27 of these cases. Of the remainder, 177, or 71 per cent needed glasses. Of the 173 patients with headache, 33 per cent needed glasses. Of 263 children with stys, blepharitis, burning eyes or injected conjunctiva, only 28 per cent had glasses prescribed. Only 23 per cent of 61 "blinking" patients and 31 per cent of 74 with reading problems needed lenses. Of 106 children who had refractions at the parents' request although no complaints were voiced, 49 per cent required glasses.

The two complaints which indicated need for glasses in the majority of children were those pertaining to vision and squint. It was evident that the children with other complaints needed them in a minority of instances and it was highly probable that the need had nothing to do with the complaints. Patients with blepharitis or stys who were helped by glasses most likely were benefited because the glasses were a deterrent to lid rubbing. Ocular tics, such as lid blinking, were aggravated as often as helped by glasses, but squeezing the lids to narrow the palpebral fissure was sometimes a sign of poor vision. Children with reading problems should have a refraction, even though lenses are needed in only a small per cent of cases, because visual comfort is an essential psychic element in reading. An explanation of the need for glasses by a relatively large number of children who had no complaints may be that the parents were reluctant to disclose their reason for ordering an examination. It appeared that refractive errors in children are not closely associated with the symptoms commonly attributed to eye strain.

Of the 1.244 children in whom refractions were done for all reasons, 610 or 49 per cent had glasses prescribed. An abnormality of the extraocular muscle balance was noted in 258 children. There were 224 cases of concomitant squint, nine cases of paralytic squint and 13 of nystagmus.

Concomitant squint is a deviation of one eye from the position of fixation and is evident in all directions of gaze. The eyes do not look at the same point simultaneously. This malady is important to the parents because of its disfigurement, to the pediatrician because he must recognize the condition at a time when it is most easily corrected, and to the patients because unless proper procedures are done a majority will lose visual acuity in one eye. In the normal course of events, a child develops binocular vision during the first six months of life, and during that time all types of squint may be present. During the following six months simultaneous ocular perception becomes dominant and squint is absent or only periodic. In the next five years the fusion faculty which is the dominating force of binocular movement attains a high degree of perfection, and after the sixth year of life chances of squint development are much reduced. It is during the first six years that squint-producing factors have their most pronounced effect, and most squints appear during that period. A weak fusion faculty is essential to the development of squint. This weakness may be due to hereditary influences or childhood diseases. The most common condition which exploits the presence of a weakened fusion faculty to produce squint is a refractive error that causes unequal vision in the two eyes or a disturbance in the accommodation con-

Read before the sections on General Surgery, General Practice, Radiology, Anesthesiology and Pediatrics at the 76th Annual Session of the California Medical Association, April 30-May 3, 1947, Los Angeles.

vergence relationship. When squint develops, the mental image from the deviating eye must be suppressed to avoid diplopia. Constant suppression of one eye rapidly leads to amblyopia and consequently it is the prevention of constant suppression that is the most important consideration in squint management.

The treatment of squint is directed at restoration and maintenance of normal visual acuity in each eye, realignment of the eyes and the development of fusion with stereopsis. These aims are accomplished with glasses, occlusion of the dominant eye, surgical operation, and orthoptics. The greatest of these is occlusion. Glasses relieve refractive errors which upset the accommodation convergence relationship and provide a clear image in each eye. Occlusion of the dominant eye restores vision lost from disuse of the squinting eye, if the occlusion is done soon after the onset of the squint. A small percent of children with squint, alternately use one eye and then the other. They do not develop amblyopia from disuse. Surgical operation places the eyes in correct alignment and makes more feasible the development of binocular vision. The restoration of normal appearance is also very important. Orthoptics are used to teach the eyes to work together with the ultimate aim of developing fusion and stereopsis. All too frequently, young adults or teen agers with a slight degree of squint are seen who have lost useful vision in one eye because of amblyopia ex anopsia which resulted because crossed eyes in childhood were allowed to be "outgrown." Occlusion at the right time would have prevented this most serious effect of squint. All children over six months of age who have a constant squint and all over one year who have periodic squint should have a complete eye examination. No child is too young for glasses or surgical correction if the indication is sufficiently great. One of the most difficult tasks in treating squint is to convince parents that occlusion is important and to obtain complete cooperation in maintaining the occlusion.

The pediatrician should, during a routine physical examination, take note of the visual acuity and watch the child's eyes while they follow a point light moved in a circle. Any shift should be noted in the position of the eyes when they are covered and uncovered individually and alternately while the attention of the child is centered on a near and then a distant object. The vision of small children may be accurately estimated with illiterate charts or by noting the ease with which they find different sized marbles rolled the length of the room. The Snellen chart may be used for older children. Any child with a squint or who does not see 20/20 or who can see 20/20 when a +1.50 lens is held before the eye should have a refraction with the eyes under a cycloplegic.

Disease of the lids, lacrimal apparatus, conjunctiva, sclera or cornea was noted in 861 cases. The most common lid condition was marginal blepharitis, of which 114 cases were seen. Chalazion was present in 72 patients, sty in 47 and congenital abnormalities in 32. The congenital lid defects were: 19 epicanthal folds, eight lid tumors, two distichiasis, two blepharophimosis, one coloboma. Seventeen lid lacerations and eight cases of contact lid edema were seen.

MARGINAL BLEPHARITIS

Marginal blepharitis is evidenced by hyperemic lid borders and varying degrees of scaliness. The two classic types are ulcerative and squamous. The squamous variety is associated with seborrheic dermatitis and the signs of that disorder will be noted on the face and scalp. The lid border scales are waxy flakes which are easily removed. In cases of ulcerative blepharitis the lid border involvement is not as uniformly diffuse. Some portion of the border will show thick tenacious scales which leave an ulcerating surface when removed. Tiny pustules may form with a lash in the center of each. The Meibomian glands are often congested and expression will produce purulent material. Staphylococcus is the organism most commonly associated with ulcerative blepharitis, and the fungus Pityrosporum ovale [2] is commonly found in the seborrheic type. Not infrequently there is a combination of the two types, and chronic conjunctivitis is usually present. The best therapy for blepharitis is keeping the lid border free of scales by removing them with forceps or applicator, massaging the pus from the Meibomian glands and applying penicillin or sulfathiazole ointment to the involved areas. Penicillin or sulfathiazole should be instilled into the conjunctival sac for the associated conjunctivitis. The routine used is penicillin solution containing 5000 units per cc. instilled every one or two hours during the day for three days. Thereafter it is used every four hours for two weeks. Penicillin ointment containing 5000 units per gram is applied to the lid borders morning and night after the scales have been removed. A solution of 5 per cent sodium sulfathiazole and 5 per cent sulfathiazole ointment may be used for patients who are sensitive to penicillin. Staphylococcus toxoid [1] is used in the extremely chronic and recalcitrant cases.

Chalazions were seen more frequently than stys, probably because many people are acquainted with stys and their clinical course. The advice of an oculist is not sought for stys unless they recur with great frequency. Because a chalazion presents a firm tumor which resolves very slowly, concern is aroused and advice sought. A chalazion is a chronic infection in a Meibomian gland which stimulates the formation of a granuloma. It absorbs very slowly and, if large enough to be disfiguring or irritating, is best excised. A sty is fundamentally a furuncle in the hair follicle which will, as any furuncle, point, drain and disappear. Because blepharitis produces itching and children are prone to scratch, the staphylococci are provided considerable help in forming stys.

Conjunctival disease was evident in 378 cases. Acute mucopurulent conjunctivitis was present in 98 cases, simple exposure conjunctivitis in 68 cases, and chronic catarrhal conjunctivitis in 41 cases. Of course in most of the blepharitis cases there was some degree of conjunctivitis. There were 45 cases of folliculosis, 28 of vernal conjunctivitis, three

Parinaud's conjunctivitis, one gonorrheal, seven pseudomembranous, five inclusion blennorrhea, two trachoma, 21 tumors, one zeroderma pigmentosa, 35 lacerations and 23 foreign bodies.

Ordinary catarrhal conjunctivitis is not painful and the parent is much more aroused than the child over the condition. This common disease is usually due to pneumococcus, Koch-Weeks bacillus, streptococcus or staphylococcus. A solution of sodium sulfathiazole or penicillin cures this disease in a few days. The presence of pain, chemosis, photophobia, marked lid edema and hyperemia, a thick purulent discharge, or pseudomembranes should stimulate detailed diagnostic procedures and extremely careful management. Preauricular adenitis is sometimes a feature in serious conjunctivitis. Conjunctival diseases such as gonorrhea, diphtheria, trachoma, oculoglandular tularemia, tuberculosis, syphilis or very virulent forms of the common type can do great damage. Permanent injury can almost always be prevented if treatment is instituted soon enough. A laboratory is essential to exact diagnosis of the type of conjunctivitis with which one is concerned. Smears of exudate and scrapings from epithelial surfaces should always be taken and cultures done when the clinician is unable to tell from inspection, palpation and history whether the conjunctivitis is of a simple type or a serious devastating condition.

Folliculosis is a benign hypertrophy of conjunctival lymphatic tissue. The glistening fish-egg like follicles are usually massed in the inferior cul de sac but may be diffusely scattered over the entire conjunctiva. School nurses often suspect trachoma, but folliculosis shows few or no inflammatory signs and the corneal invasion of blood vessels so characteristic of trachoma is absent. Folliculosis needs no treatment and disappears spontaneously.

Vernal conjunctivitis is characterized by itching, seasonal variation of intensity, ropy discharge, hypertrophic papillae, eosinophila in epithelial scrapings and a milky appearance of the conjunctiva. It is treated symptomatically and by anti-allergic procedures such as abstinence from the offending allergens, desensitization, or the use of anti-histaminic agents.

One hundred and five abnormalities of the lacrimal apparatus were recorded. Occlusion of the nasolacrimal duct was present in 102 of these cases, dacryoadenitis in two cases, and acute dacryocystitis in one case.

Infants begin lacrimation at approximately two weeks of age. When, because of some developmental difficulty, the lacrimal drainage passages do not carry the tears to the nose, epiphora results. If the occlusion is due to debris in the nasolacrimal duct, time and simple massage over the lacrimal sac often provide patency. If massage over a period of four to five weeks is unsuccessful, or if purulent dacryocystitis ensues, the passage should be probed. In infants this trouble is easily and readily cured by simple probing, but if chronic dacryocystitis develops, permanent changes occur in the walls of the nasolacrimal passages which necessitate surgical operation to establish a new opening into the nose. Probing of nasolacrimal ducts is done with local anesthesia.

There were 87 cases of corneal trouble. They consisted of 26 corneal foreign bodies, 25 corneal lacerations, 12 interstitial keratitis, 11 corneal ulcers, five cigarette burns, five phlyctenular keratitis, two ether burns and one keratoconus. Most corneal foreign bodies were easily removed with a spud following the instillation of a topical anesthesia. The chief problem was winning the child's confidence, and in some instances a general anesthesia was indicated. The corneal lacerations varied in severity from simple epithelial abrasions to ragged lacerations completely through the cornea. Cat and dog claw wounds were most common. A cat's claw can easily rip through the cornea. Jack straws, BBs, flying stones, arrows, coat hangers, knives, finger nail files, screw drivers and a screen door spring were responsible for the most severe injuries.

Interstitial keratitis due to congenital syphilis is not rare. The onset is usually between the fifth and fifteenth year of age and frequently is associated with some relatively minor ocular trauma. It begins in one eye with photophobia, lacrimation pericorneal injection and a grayish infiltrate. The infiltrate of the corneal stroma is usually peripheral but occasionally is centrally located. Blood vessels soon begin to invade the deep layers of the cornea. The keratitis with associated iridocyclitis and choroiditis lasts approximately four months and during this period the other eye becomes involved. There is no way to alter the course of the disease, but the immediate and future effects of it are definitely reduced by maintaining a dilated pupil and by administering specific anti-luetic therapy and foreign protein.

The kind of corneal ulcer most commonly encountered was due to herpes simplex. Children who are prone to have labial or nasal herpes are subject to this disease, which produces a typically dentritic ulcer. These children have marked photophobia and lacrimation. The conjunctiva is injected and the injection is chiefly pericorneal. Early diagnosis followed by curettage and chemical cauterization of the involved site results in rapid cure. Temporizing measures may result in corneal opacities with visual reduction. The disease has a tendency to recur and smallpox vaccination may help prevent it.

Intraocular abnormalities were relatively uncommon. Only 69 children had an intraocular disease. Of this number 39 had a congenital or hereditary malady. Twenty-two had intraocular injuries. The most common finding was congenital cataracts. These were found in 15 patients. This condition always has to be suspected if the mother had German measles early in pregnancy. The diagnosis of a cataract which is extensive enough to impair vision should always be made by the pediatrician. Routine dilation of infants' pupils at their first post natal office visit would certainly aid in early diagnosis of intraocular disease.

For this purpose, 5 per cent euphthalmine, or 2.5 per cent neosynephrine, or 3 per cent homatropine

may be used. Babies' pupils are normally very small and a hurried flashlight examination of the eyes frequently misses even dense cataracts. Not all lenticular opacities necessitate surgical operation, but in those cases in which it is necessary there should be a needling of the lens as soon as the child can tolerate a short general anesthesia. The patients who have dense cataracts from birth seldom develop normal vision even when the operative result provides a clear passage to the retina. Those who develop dense cataracts later—that is, after two or three years—may obtain normal visual acuity following surgical operation.

The other congenital conditions included two cases of retrolental fibroplasia, five of coloboma of the iris or choroid or both, one of aniridia, two of albinism, three of congenital glaucoma, two of retinoblastoma (one of which was bilateral), four of toxoplasmosis and three of microphthalmus.

Toxoplasmosis, a rather new clinical entity, is a protozoan infection which produces a disseminated encephalomyelitis in infants. Convulsions and internal hydrocephalus may appear soon after birth. Roentgenograms show cerebral calcifications. Bilateral single or multiple chorioretinal granulomas which usually involve the central portion of the retina are seen. It is thought that the disease is acquired during intrauterine life.[3] Although the mothers of these children have serum antibodies for the toxoplasma, clinical evidence of maternal infection is rare. The mother of one patient with toxoplasmosis seen by the author had developed an elevated lesion in the central retina of one eye in the eighth month of pregnancy.

There were 22 cases of ocular trauma of such severity that intraocular damage was done. These include five cases of hyphemia, five traumatic cataracts, one choroidal tear, two cases of detached retina, four of iritis, one of panophthalmitis and one in which there was extensive laceration with extrusion of the contents of the eye.

The remainder of the cases included two of malignant myopia, one of familial amaurotic idiocy, two of choked discs secondary to cerebellar tumors, two of acute optic neuritis, and two of optic atrophy.

SUMMARY AND CONCLUSIONS

In reviewing the case records of 1,941 children it was found that 1,244 refractions were done. The ordinary eye complaints which lead parents or doctor to suspect the need of glasses are listed. The only two complaints which indicated the need of glasses in the majority of cases were poor vision and strabismus. The other complaints in the vast majority of cases were not attributable to refractive errors.

Concomitant squint was present in 224 children. Of these, 177 had a refractive error that was at least partially responsible for the squint, and glasses were prescribed. All children who have squint or are suspected of having it should have a refraction done with the eyes under a cycloplegic. The dominant non-squinting eye of monocular squints should be occluded as early as possible. Surgical operation and orthoptics should be used to restore the proper alignment and fusion.

The most common external diseases were blepharitis, conjunctivitis and occluded nasolacrimal ducts. A few suggestions for their management are made.

There were 69 cases of intraocular disease, with 22 different causative entities. Congenital cataract was the most common. Developmental anomalies or congenital diseases were present in 39 instances. Trauma accounted for most of the remainder.

Of 2,432 ocular problems, 1,244 or 51 per cent were caused by refraction abnormalities; 258 or 11 per cent were the result of abnormalities of the extraocular muscles; 861 or 35 per cent were due to external diseases; and 69 or 3 per cent were caused by intraocular maladies.

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REFERENCES

1. O'Brien, C. S., and Allen, J. A.: Staphylococcus conjunctivitis, Am. Jour. Ophth., 21:641 (June), 1938.

2. Thygeson, P.: Etiology and treatment of blepharitis, Arch. of Ophth., 36:445 (Oct.), 1946.

3. Wolf, A., Cowen, D., and Paige, B.: Human toxoplasmosis: Occurrence in infants as an encephalomyelitis: Verification by transmission to animals, Science, 89:226-227 (March), 1939.

Reinfection in Syphilis

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THE problem of reinfection in syphilis has assumed considerable practical importance during the past few years. This has been due to the introduction of the intensive methods of arsenotherapy and penicillin therapy for early syphilis. In reporting the results of their investigation, workers in the field of massive arsenotherapy very early indicated that many times they were unable to distinguish between the lesions of infectious relapse and reinfection. They preferred to classify all such cases as representing infectious relapse although many of these may well have been examples of reinfection. This attitude on the part of these writers was admirable even though it undoubtedly decreased the reported percentage of satisfactory therapeutic results obtained by the methods they were investigating.

The adoption of short intensive methods of treatment of early syphilis and early latent syphilis has shortened the cure time of syphilis to a few weeks instead of one, two or three years. This fact has increased the probability of reinfection many times. As Schoch and Alexander[3] recently pointed out, patients are cured so quickly that the source and contacts of their infections are either actively infectious or becoming so about the time they are discharged from treatment. They are thus immediately exposed to the possibility of reinfection. Where the more conventional long continued methods of treatment are used, the source and contacts of the patient have either also been brought under control by therapy or have been eliminated for other reasons. The opportunity of contact with infectious lesions by the patient therefore becomes greatly reduced.

Reinfection in syphilis may be defincd as a new infection with Treponema Pallidum in a patient who had a previous syphilitic infection which had been completely eradicated by specific therapy. Infectious relapse of syphilis may be defined as a recurrence of infectious lesions in a patient who has continued to harbor the organisms of his original infection. Superinfection in syphilis is a reinoculation of Treponema Pallidum from his environment in a patient who continues to harbor the Treponema Pallidum of his first infection.

Although we can define these phenomena in syphilis satisfactorily, many times it is impossible to distinguish them clinically. Moore,[1] pointed this out clearly in an editorial published in July, 1945. The fact that syphilologists are unable to distinguish between reinfection and infectious relapse in syphilis is also brought out in the recent article of Thomas, Landy, and Cooper.[5] To quote: "In tabulating data no distinction has been made between relapses and reinfection. In our minds there is no question that some are reinfections. In our opinion, probably 40 per cent are actually reinfections rather than relapses." Further on they write: "It frequently appeared that patients had been reinfected by sexual partners whom they themselves had infected." Schoch and Alexander discussed this possibility and Schoch applied the term "ping pong" syphilis to it. There can be little doubt that this method of reinfection is a real problem in syphilis control. Thomas and his associates throughout their paper in discussing their data always refer to the reappearance of infectious lesions after treatment with penicillin in beeswax and peanut oil as either reinfection or relapse.

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Read before the section on Dermatology and Syphilology at the 76th Annual Session of the California Medical Association, April 30-May 3, 1947, Los Angeles.

CRITERIA OF REINFECTION

In spite of the difficulties surrounding the problem of distinguishing relapse from reinfection, one should not be too quick to assume that a given lesion represents reinfection rather than relapse. A lax attitude will result in the appearance of a higher percentage of satisfactory results from certain methods of therapy than can actually be obtained. From a scientific standpoint it would appear better that the method suffer even though an occasional reinfection be recorded as a relapse.

Stokes, Schoch and Ireland[4] in 1931 reviewed the criteria which should be required before a given case might be considered as an example of reinfection. They classified these criteria into three grades. In grade I were the requirements necessary for an indisputable diagnosis of reinfection: in grade II, the requirements were less strict and if these were fulfilled the diagnosis of reinfection was probable; in grade III were placed fewer and more lax requirements, which, if fulfilled would permit the diagnosis of possible reinfection. The criteria listed in the first group were so exacting as to be almost impossible of fulfillment, and the authors found no patients which could be placed in this group; in grade II there were 120 instances and in grade III there were 116. From a practical standpoint the criteria listed as a grade II should be acceptable for a diagnosis of reinfection. Briefly they are:

1. An indisputable first infection.

2. The patient shall remain clinically and serologically well for one year after adequate therapy.

3. The second chancre must be in a different location than the first and shall have a different lymph drainage.

4. The darkfield examination of the second chancre must be positive for Treponema Pallidum.

5. The second chancre must be accompanied by satellite adenopathy.

6. The blood serologic tests for syphilis must be negative at the start and become positive under observation.

7. The secondary eruption must appear not less than 20 days after the development of the second chancre.

Moore [1] recently reviewed the criteria considered essential for a diagnosis of reinfection of syphilis in man. He discussed each criterion serriatum and stated: "A critique of the criteria of reinfection in syphilis in man seems clearly to show that this phenomenon cannot be differentiated from relapse on any grounds on which two or more observers would at present agree."

Schoch and Alexander [3] would relax the requirements for a diagnosis of reinfection in syphilis. They believe that reinfection occurs frequently after short intensive courses of treatment for early syphilis. From Paget's [2] recent publication on long term results in the treatment of early syphilis they conclude that any patient who remains clinically and serologically well for five years after adequate treatment for early syphilis, is permanently cured. And further, that should a patient who fulfills the above requirements develop evidence of early syphilis, then he has suffered with a reinfection rather than relapse.

CASE REPORT

Case 1.*—A single, white, male, merchant seaman, aged 43 years, entered the U. S. Marine Hospital, San Francisco, on Jan. 18, 1947, with chief complaint of a penile chancre which had existed for 30 days. The patient first contracted syphilis in China in 1926. At that time he had a syphilitic chancre, inguinal adenopathy and a positive blood test. He was in the United States Navy and was treated on board ship with 32 injections of salvarsan and an unknown number of bismuth injections. He was also treated with mercury ointment and believes the total treatment extended over a period of one year. In subsequent years many blood tests were negative, the last known negative serologic test for syphilis was in Sept., 1946. Venereal exposure in mid November was followed by the appearance of a small penile lesion on Dec. 15, 1946. The lesion persisted and increased in size.

Physical examination on admission was entirely negative except for a cartilagenous, deep, punched-out chancre in the sulcus and bilateral enlarged inguinal nodes which were discrete, hard, rubbery, non-tender and in satellite arrangement. Darkfield examination of chancre was positive for Treponema Pallidum. Tests of the blood showed a positive Wassermann, a positive Kahn test with 16 Kahn units. A chest roentgenogram showed no abnormalities of heart, great vessels or lungs. Spinal fluid examination was entirely negative. On admission the patient ran a low swinging fever between 37.5°C. and 37.9°C. Ducrey and Frei skin tests were both negative.

Diagnosis: Primary syphilis reinfection.

Under treatment with 40,000 units of penicillin every three hours (60 injections), Mapharsen 0.06 gm. each for eight injections, and Bismuth 0.13 gm. each for four injections—the lesions regressed slowly and the fever disappeared.

COMMENT

This patient was treated for his first syphilitic infection 20 years before the appearance of the second infection. The records indicate that he had remained clinically and serologically well after one year of anti-syphilitic therapy. The second lesion was clinically that of a syphilitic chancre and was accompanied by satellite inguinal adenopathy. The second chancre was at a different site than the first. The serologic test for syphilis was not negative at the time the patient was seen with his second infection.

This case undoubtedly is an example of reinfection in syphilis even though the serologic test for syphilis was positive when the patient was first seen with the second infection. In other respects it would fulfill the criteria of the grade II class, i.e., probable reinfection. The long period between the two infections alone would satisfy the most critical individual as to the authenticity of reinfection in this case. If that is granted, then the criteria required to establish an indisputable diagnosis of reinfection in syphilis do not seem absolutely essential.

CASE REPORT

Case 2.†—A single, white, merchant seaman, aged 42, entered the U. S. Marine Hospital, San Francisco, on Feb. 6, 1947, with chief complaint of two penile ulcers for one month. The patient had been well all his life except for developing a syphilitic primary with positive serologic test for syphilis in 1930. He was treated at the Mercy Hospital in New Orleans as an in-patient for 87 days, receiving at least 16 injections of salvarsan and 32 injections of bismuth. The lesions healed rapidly at that time and subsequent serologic tests for syphilis were negative until one year before entry. There were multiple venereal exposures, the last on Nov. 30, 1946, and a chancre appeared on Jan. 4, 1947, and persisted until entry.

Physical examination on entry showed a well developed muscular man, apparently well. The only physical findings were two indurated, punched-out, non-tender chancres, 1 cm. in diameter, at the base of the shaft of the penis, with bilateral inguinal nodes enlarged and rubbery with typical satellite arrangement.

Darkfield examination of the lesions for Pallida and blood tests for syphilis were positive, and quantitative Kahn test showed 1.024 units.

COMMENT

The long period (17 years) between this patient's two infections establishes the fact of reinfection here. The lesions and their accompanying adenopathy conform to that of primary syphilis clinically. The original infection was indisputable and the subsequent treatment sufficient to eradicate it. Subsequent blood tests for syphilis were negative on several occasions. The incubation period for the second infection conformed to that expected in primary syphilis. The blood tests for syphilis were strongly positive when the patient was seen with his second infection.

Few will doubt the authentieity of reinfection in this case although the facts available do not satisfy the requirements for Stokes' grade I or for an indisputable diagnosis of reinfection, nor do they ful-

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† From the U. S. Marine Hospital, San Francisco.

fill the necessary criteria required in his grade II classification.

CASE REPORT

CASE 3.—White male, married, aged 44, was first seen by the author on Jan. 8, 1938. There was a papular eruption of secondary syphilis over palms, soles, face and scalp. No primary sore was found. The patient denied exposure to venereal disease. The blood Wassermann and Kahn were strongly positive. Anti-syphilitic treatment was begun on Jan. 8, 1938, and given continuously for two and one-half years, alternating courses of Mapharsen and Bismuth being given. With anti-syphilitic therapy the eruption cleared promptly. The patient developed a nine-day erythema nine days after starting treatment. Tests of the blood on July 22, 1938, Oct. 2, 1939, Sept. 9, 1940, Nov. 14, 1940, Feb. 3, 1941, June 16, 1941, April 8, 1942, Sept. 14, 1943, were negative. Results of spinal fluid examination in 1938 and 1939 were entirely normal.

The patient entered the Army in 1943 and blood tests for syphilis were negative on several occasions.

On July 23, 1946, he was again seen by the author, and at this time was complaining of a small abrasion in the sulcus. Satellite adenopathy was present in the right groin. The darkfield examination was positive for Treponema Pallidum. The blood tests for syphilis were negative. The patient later admitted extramarital exposure five weeks previously and he was treated with 6,000,000 units of penicillin in beeswax and peanut oil, 40 injections of Mapharsen and 15 injections of bismuth salicylate. The blood Wassermann and Kahn were negative on Feb. 24, 1947.

COMMENT

This case is undoubtedly an example of reinfection in syphilis. The patient was seen by the author during both infections. The original infection was indisputable as the eruption was characteristic of secondary syphilis, was accompanied by a strongly positive blood Wassermann and Kahn test and responded promptly to anti-syphilitic treatment. After very adequate anti-syphilitic therapy the patient remained clinically and serologically well for seven and one-half years. The second infection followed five weeks after exposure; the lesion was clinically a primary sore; satellite adenopathy was present; the darkfield examination was positive for Treponema Pallidum and the blood Wassermann and Kahn were negative. While this case does not fulfill all the requirements of Stokes' grade I criteria for reinfection, there is no doubt that this patient had a reinfection eight and one-half years after the first infection. During treatment for both infections he vigorously denied extramarital exposure but finally confessed to exposure five weeks previous to his second infection, which emphasizes that a history of denial of exposure or previous lesions is often valueless.

COMMENT

Reinfection, by definition, is the only proof of cure of the first infection in syphilis which can be obtained during the life of an individual. Ultimate proof of cure can be established only by postmortem examination of all the tissues of the patient. Therefore reinfection in syphilis is of definite practical importance. The establishment of proof of reinfection is very difficult and at times impossible. Nevertheless reinfection occurs in syphilis probably much more frequently than can be proved beyond a doubt.

Stokes and his associates laid down a group of requirements for the indisputable diagnosis of reinfection in syphilis which the clinician cannot fulfill. They are so exacting that even a very well equipped syphilis clinic cannot meet such criteria. This attitude seems extreme, as one must agree that syphilis is curable and reinfections do occur. A lax attitude, however, toward the diagnosis of reinfection is to be decried since it would be injurious to the study of methods of treatment for syphilis. Such an attitude would give a false evaluation of a given therapeutic procedure. Changing concepts of immunity in syphilis and the therapy of the disease should serve to alter the strict criteria laid down by Stokes. Moore pointed out that in light of present knowledge these criteria could not withstand critical analysis.

In spite of our inability to distinguish clinically between reinfection and relapse, the author believes that there is no substitute for time in interpreting the effects of therapy in syphilis. Relapse and progression occur so frequently after apparently successful therapy that one should be very cautious in declaring a given treatment method satisfactory until a sufficient period of observation has passed. During the first five years following therapy for early syphilis, if there is development of symptoms which may be those of either infectious relapse or reinfection, it would be better to consider the lesions as those of relapse. There is a real need for an agreement as to how long this period of observation should be before a diagnosis of reinfection would be acceptable.

The diagnosis of reinfection in Cases 1, 2, and 3, presented in this paper, is established by the clinical findings. The intervals of 20 years, 17 years, and eight and a half years, respectively, between the two infections, plus the fact that adequate anti-syphilitic therapy was given during the first infection in Case 1, more than adequate therapy in Case 3, and moderately adequate therapy in Case 2, adds further proof to the claim of reinfection in these cases. Yet none of them would fulfill the requirements of an indisputable diagnosis of reinfection or grade I of Stokes and only one fulfills the requirements of the grade II type of criteria of reinfection. These cases emphasize the futility of attempting to set up hard and fast rules for the diagnosis of reinfection. It is essential to analyze each case individually, in order to determine the validity of a claim of reinfection.

SUMMARY

1. Three patients with reinfection in syphilis are reported.

2. In one of these patients both infections, eight and a half years apart, were treated by the author.

3. In two, the first infection is a matter of record with the United States Government. In these two, intervals of 20 and 17 years separated the first and second infections.

4. A discussion of the criteria necessary for a diagnosis of reinfection in syphilis is presented.

REFERENCES

1. Moore, J. E.: The changing concept of reinfection with syphilis and its applicability as a criterion of cure, Am. J. Syph. Gonor. and Ven. Dis., 29:474, 1945.

2. Padget, P.: Long term results in the treatment of early syphilis, Am. J. Syph., Gonor. and Ven. Dis., 24:692 (Nov.), 1940.

3. Schoch, A. G., and Alexander, L. J.: Reinfection in syphilis, Am. J. Syph., Gonor. and Ven. Dis., 27:15 (Jan.), 1943.

4. Stokes, J. H., Schoch, A. G., and Ireland, F. A.: The clinical concept of reinfection in syphilis, a critique based on five cases, the reported literature and a study of early relapse, Arch. Dermat. and Syph., 23:829 (May), 1931.

5. Thomas, E. W., Landy, S., and Cooper, C.: Rapid treatment of early syphilis with penicillin in beeswax and oil, J. Ven. Dis. Inf., 28:19, 1947.

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The author is indebted to Dr. E. Javitz of the U. S. Public Health Service for the preparation of the case reports 1 and 2, and for his aid in discovering the fact of reinfection in these cases.

Discussion by KENNETH L. STOUT, M.D., *Beverly Hills*

In addition to his contribution of three case reports of reinfection in syphilis, Dr. Epstein has joined with others in recent literature in calling attention to the impracticality of the rigid criteria for reinfection laid down by Stokes and co-workers in 1931.

You will remember in Grade I class of criteria there were 17 points to establish an indisputable reinfection; in Grade II, eight points for a probable reinfection and in Grade III, five points for a possible reinfection. Using Stokes' criteria, there is not a single case of indisputable reinfection in the literature; yet, I am sure, all of us (experienced in treatment of syphilis) have had at least a few cases which were felt to be instances of reinfection.

As Dr. Epstein pointed out, the tendency has been to consider these cases of second infection—either infectious relapse or super-infection.

In 1942, Felix Pinkus reported on a study of 18,000 individual prostitutes who were treated for syphilis in the Berlin Hospital from 1908 to 1933. Of 3,047 observed for ten years or more, 2,856 showed clinical or serological evidence of syphilis; of the 2,856, 4 per cent showed infectious lesions for as long as seven years after original infection and 2 per cent presented infectious lesions as long as ten years after their first infection. His opinion was that almost all the infectious lesions present after five years (from initial infection) were either super-infections or reinfections.

Stokes reported, at the University of Pennsylvania clinic, that reinfection in syphilis occurred four times in 2,439 cases. Analysis of 5,952 treated cases of early syphilis in the League of Nations Health Organization study showed 360 instances of mucocutaneous relapse, nine probable reinfections and 31 possible reinfections.

Many old-timers—in pre-arsphenamine days—were strong in the conviction that syphilis, having once invaded the body, could never be shaken off. They considered syphilis an incurable disease and reinfection impossible. Now, although there are no absolute criteria for biologic cure in human syphilis, most modern syphilologists believe early syphilis may be cured.

The relationship of curability of syphilis to reinfection may be considered in the light of the present-day concept of immunity in syphilis. Immunity develops but is not absolute as has been shown by the successful reinoculation experiments made in all phases of syphilis—early, late and congenital. These experiments in humans and animals were reviewed by Beerman in a paper published in 1946.

Neisser—who experimentally studied immunity in syphilis in higher apes—believed that ability to reinfect a treated experimental animal meant the original infection had been cured and that resistance to reinoculation was dependent upon persistence of spirochetes in the body. Neisser's ideas prevailed until the work of Chesney and his associates.

Chesney showed animals may be cured regardless of whether treated early or late in course of infection—although reinfection was possible only in those treated early. When treatment was started after the 90th day of the infection, the animals usually were not successfully reinoculated, although subsequent follow-up indicated they were apparently cured.

These experiments suggest that in rabbits, and, by analogy, presumably in man, some degree of immunity may persist after complete eradication of the infection. They also suggest that ability to reinfect is an unsatisfactory criterion of cure.

Reinfection may be impossible because of the persistence of the refractory state, even though the infection has been completely abolished. Or, reinfection may occur in the face of persistent infection.

To clinicians this concept of immunity in syphilis is encouraging. Moore states that if it is true, then not only early but late syphilis also may be curable in the biologic sense.

Worthy of mention is the fact that in Dr. Epstein's three cases, orthodox treatment was used in the first infections. The present intensive short-term therapy methods used in early syphilis will greatly increase the reporting of reinfections in syphilis.

* * *

Discussion by DAVID FROST, M.D., *San Leandro*

As Dr. Epstein stated, reinfection in syphilis is of great practical importance for, as he defines reinfection, it means that the patient was biologically cured of his first infection. He stressed time as one of the important factors in the differential diagnosis between infectious relapse, reinfection, and superinfection. Various criteria set up so far are not practicable and are hardly workable. Differentiating between relapse, reinfection, and superinfection in the general run of cases is extremely confusing to say the very least. Accurate differential diagnosis may have to await the discovery of a test which may show us that biological cure has actually been attained.

From the public health point of view, reinfection is very important. If, as many feel, the patient with early syphilis will be completely cured as a result of intensive therapy and will not develop a life long immunity, then we, who treat early syphilis, are obliged to find the source of the case even sooner than we have ever done in the past. Otherwise, the patient who is adequately treated will be reinfected by his own source of infection as is occurring so frequently in gonorrhea. Our experience at the Oakland Health Department Clinic in this latter disease has forced us to treat husband and wife on the same day to prevent reinfection of the original case. The physician in private practice may be forced to take a more active interest in finding the contacts to cases of early syphilis in the future than he has in the past as an adjunct to good therapy as well as a requirement of public health.

Opisthotonos Fetalis in Breech Presentation

Report of a Case with Bilateral Congenital Posterior Dislocation of the Tibiae

George F. Melody, M.D., *San Francisco*

THE management of breech presentation continues to be a major obstetrical responsibility. According to Stander[9] the uncorrected gross fetal mortality in breech presentation is about 20 per cent. Prematurity and congenital anomalies contribute significant factors to the total mortality. Therefore, it would seem worth while to record certain observations which might contribute to our appreciation of the natural history of breech presentation.

According to Tompkins[11] the so-called "classical factors," namely, contracted pelvis, placenta praevia, pelvic tumors, and fetal malformations, account for only one-sixth of the total breech births. The same author suggests that any condition which will inhibit effectual movements of the fetus in utero (such as dysplasia of the hips, or hydrocephalus) may cause persistent breech presentation by preventing spontaneous cephalic version. Vartan,[12] from his study of 969 cases of breech delivery in five London hospitals, concluded that extended legs is the chief cause for failure of spontaneous cephalic version to occur as term approaches.

Stein[10] calls attention to the difference in prognosis between cases of complete breech presentation (with the fetus well flexed) and the incomplete varities of breech presentation (with the fetus in attitudes of extension or deflexion). According to Stein's experience delivery spontaneously or with minimal assistance may be awaited if the breech is well flexed, whereas dystocia is to be anticipated in those instances where there is extension of the fetus. Stein, therefore, recommends that clinical evaluation be supplemented by careful roentgenography shortly before term.

The following case is presented for several reasons: (1) It is the first instance of transient opisthotonos in breech presentation that has been reported, as far as the author can ascertain; (2) The persistent breech presentation was surmised after delivery to have been due to the inability of the fetus to enjoy free movement in utero, due to a melange of congenital anomalies involving both lower extremities: and, (3) The anomalies in themselves are unique. No similar instance of bilateral congenital posterior dislocation of the tibiae, with associated congenital absence of the epiphyseal centers for the distal ends of the femora and proximal ends of the tibiae. could be found in the literature.

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CASE REPORT

A 22-year-old white primigravida was first seen on Oct. 26, 1945. The expected date of confinement was Feb. 23, 1946. The patient was robust and had always enjoyed excellent health. The family history is of interest inasmuch as the husband's father was said to have been born with a congenital anomaly of both lower extremities, for which amputation at the mid-thigh was carried out in childhood.

The patient experienced no acute exanthemata during any part of the pregnancy. Findings on general physical examination were within normal limits. Pelvic mensuration disclosed a normal gynecoid pelvis. Tests of the blood for syphilis were negative. The Rh-factor was positive. There was no anemia, and urinalyses were consistently negative.

Pregnancy progressed normally. Breech presentation was first diagnosed at six and one-half months' gestation, and subsequent examinations every two weeks disclosed a persistence of the breech presentation. The position, Right Sacro-Posterior, was established one month from term and continued so. In the seventh and eighth months several attempts at cephalic version by external manipulation were unsuccessful.

Roentgenograms taken two weeks from term (Figure 1) showed a normal gynecoid pelvis, with a single fetus in breech presentation. The attitude of the fetus was that of opisthotonos, with the head arched against the back, and the anterior arm extended toward the pelvic inlet. Because of the marked hyperextension of the fetal skeleton, the question was raised as to whether or not elective cesarean section might not be in order. To help in reaching a decision, new roentgenograms were taken. The film (Figure 2) taken four days later than the first, revealed a striking change: the fetus had spontaneously corrected the attitude of opisthotonos, and had assumed a habitus of flexion. Even the anterior arm, which previously had been pendent in the pelvis, had assumed a flexed position across the chest. Comparison of the two films showed that the distortion of the head shadow in Figure 1 (taken with the patient in the dorsal supine position) had been corrected in the subsequent film taken with the patient in the prone position.

Labor was induced with castor oil on Mar. 6, 1946. After a first stage of two hours and a second stage of 20 minutes. delivery was easily completed, after the single footling had been converted into a double footling. The position was Right Sacro-Posterior. Both shoulders were delivered as anterior shoulders, and the after-coming head was delivered after the method of Wiegand-Martin. Adequate medio-lateral episiotomy facilitated the delivery.

The infant was a viable male. Birth-weight was six pounds, eight ounces. Respirations were not delayed; color and circulation were normal. General physical examination of the baby revealed no abnormalities, except for the lower extremities. Both knees were held in flexion with posterior dislocation of the lower legs, so that the distal end of the femur projected beyond the knee-joint on either side (Figure 3). Moreover, there was bilateral clubfoot. A roentgenogram



Figure 1.—Breech presentation in attitude of opisthotonos. Note extreme hyperextension of cervicodorsal spine. The size of the fetal head is magnified, due to the exposure having been taken with the patient in the supine position.



Figure 2.—Roentgenogram taken four days after Figure 1 shows the fetal attitude of opisthotonos to have changed to one of flexion. The cervicodorsal spine is now well flexed, and the arms, previously extended, are now folded across the chest. The magnification of the head is diminished owing to patient being prone.



Figure 3.—Photograph of newly born infant. Note that the knees are held in flexion with posterior dislocation of the lower legs, so that the distal end of the femur projects beyond the knee-joint. The degree of club-foot deformity is extreme.

of the infant (Figure 4) disclosed: (1) posterior dislocation of the tibiae; (2) absent epiphyses for the lower ends of the femora and upper ends of the tibiae; (3) fibulae absent; (4) only one tarsal bone, the calcaneus, present; the talus and cuboid (which should be present at birth) not demonstrated; (5) on the right foot only four metatarsals and phalanges demonstrated; and (6) six lumbar vertebrae. The infant has gained weight normally, and has developed naturally in all respects except for failure of the lower extremities to grow. There has been no evidence of impaired mentality. The infant has been under competent orthopedic supervision since birth.

The puerperium was uncomplicated and without morbidity. Post-partum examination showed a satisfactory recovery: the episiotomy was healed; cervix was clean and posterior in position; the corpus had involuted naturally, and the adnexa were normal.

DISCUSSION

The case reported above would lend support to the theory championed by Tompkins[11] and Vartan[12] that fetal conditions which prevent free motion in utero predispose to persistent breech presentation. It is obvious that the severe orthopedic anomalies of the lower extremities present in the case under discussion readily precluded the freedom of motion in utero which usually brings about spontaneous version to a cephalic presentation.

Deflexion attitudes in breech presentation are not uncommon. However, opisthotonos is an extreme degree of hyperextension even in breech presentation. Kobak[4] has recently reported an instance of opisthotonos fetalis occurring in association with a face presentation. Opisthotonos in an infant presenting transversely has been reported by Falls.[2] It is a unique experience to record roentgenographically a breech presentation in an attitude of opisthotonos, and to have the extreme hyperextension spontaneously change to a habitus of full flexion several days later. The assumption of an attitude of flexion decisively changed the prognosis, and gave reasonable assurance of a successful pelvic delivery. Had the hyperextension persisted on subsequent radiograms, abdominal delivery may well have been the method of choice.

The plan for delivery in breech presentation should not be a haphazard affair. On the basis of



Figure 4.—Roentgenogram of newly born infant. The bilateral posterior dislocation of the tibiae is pronounced.

careful clinical examination, supplemented whenever possible by precise roentgen pelvimetry, one must determine, preferably two or three weeks before term, the prospects for safe pelvic delivery. To obtain minimal distortion of the fetal head one of the exposures should be taken with the patient prone, thus minimizing the distance of the fetal head from the film. Lateral films often are very revealing. Potter[7] and co-workers have recently advocated making the head and arms of the fetus the roentgen target. A persistent hyperextension attitude, including opisthotonos, might well suggest the advisability of delivery by cesarean section.

The multiple congenital anomalies of the lower extremities presented by the infant described in this report are unique. It is of particular interest that the paternal grandfather possibly had similar defects, which resulted in amputation of the lower extremities in childhood. Hussein[3] considers mesenchymal defects the etiologic factor in multiple anomalies. It is probable that the defects result from deficient growth potential in the precartilage mesenchyme. In speaking of congenital dislocations of the knee, Campbell[1] states that the "tibia is practically always displaced anteriorly and often there is an associated genu recurvatum." In the case reported herein, not only is the posterior displacement of the tibiae unusual, but the absence of the epiphyseal ossification centers of the distal femora and proximal tibiae is noteworthy. These centers are usually present at birth. According to Patten[6] these ossification centers may appear between the sixth or seventh months of intrauterine life and the third or fourth postnatal months. In the instance reported there was no evidence of these centers even by the sixth postnatal month. Some years ago Murphy[5] reported the association of subluxation of the knee-joint and familial finger contracture; the knee-joint anomaly occurred in 11 members of the particular family over three generations. Either knee was affected, and the subluxation usually became manifest at puberty. The subject of congenital dislocation of the knee has recently been reviewed by Provenzano.[8]

SUMMARY

1. An instance of transient opisthotonos in breech presentation has been presented.

2. The combination of several rare congenital anomalies of the lower extremities, including posterior dislocation of the tibiae, seemingly prevented normal free movement in utero and thereby precluded the spontaneous cephalic version which usually occurs in the latter months of pregnancy.

3. The advisability of careful x-ray study prior to term in breech presentation has been emphasized. The advantage of repeating the roentgen study in an instance of marked hyperextension (opisthotonos) has been shown.

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REFERENCES

1. Campbell, W. C.: Operative orthopedics, St. Louis, 1939, The C. V. Mosby Company, p. 1079.

2. Falls, F. H.: Opisthotonus foetus, Surg., Gynec. and Obst., 24:65, 1917.

3. Hussein, M. K.: Multiple congenital dislocation, J. Bone and Joint Surg., 20:488 (April), 1938.

4. Kobak, A. J.: Opisthotonus fetalis, Am. J. Obst. and Gynec., 51:583 (April), 1946.

5. Murphy, D. P.: Familial finger contracture and associated familial knee-joint subluxation, J.A.M.A., 86:397 (Feb. 6), 1926.

6. Patten, B. M.: Human embryology, ed. 1, Philadelphia, 1946, The Blakiston Company, p. 1289.

7. Potter, M. G.: Erving, H. W., and Brown, J. B.: Observations on breech deliveries in a general hospital, Am. J. Obst. and Gynec., 49:567 (April), 1945.

8. Provenzano, R. W.: Congenital dislocation of the knee, New Eng. J. Med., 236:360, 1947.

9. Stander, H. J.: Textbook of obstetrics, ed. 1, New York, 1945, D. Appleton-Century Company, p. 358.

10. Stein, I. F.: Deflection attitudes in breech presentation, J.A.M.A., 117:1430 (Oct.), 1941.

11. Tompkins, P.: An inquiry into the cause of breech presentation, Am. J. Obst. and Gynec., 51:595-606 (May), 1946.

12. Vartan, C. K.: Cause of breech presentation, Lancet 1:595 (March), 1940.

CASE REPORTS

- Hepatitis Without Jaundice
- Hemothorax in Relation to Benign Pelvic Tumors

Hepatitis Without Jaundice

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ALMOST all synonyms for the term "infectious hepatitis" have the word "jaundice" attached. For many years Virchow's name of catarrhal jaundice was accepted; even now such names as non-spirochaetal infectious jaundice, camp jaundice, *ictere contagieux*, and *Kriegsicterus* are used by different students of hepatitis. As a result of this pairing of terms, the clinical concept of hepatitis usually connotes the presence of jaundice, and in civilian practice a diagnosis of hepatitis in the absence of jaundice is rarely considered. However, the clinical syndrome of hepatitis without jaundice has been recognized in military quarters during all epidemics of infectious hepatitis. The purpose of this paper is to review the subject and to report two civilian cases recently observed which may belong to this classification.

The literature on the subject is almost all of recent date. Blumer [4] in 1923, describing "infectious jaundice in the United States," said definitely that "jaundice may be absent." Cameron [7] in 1943, in a discussion of infective hepatitis, makes the statement, "There is a clinical opinion in Palestine that the disease may occur without jaundice at all." From West Africa Brookfield [5] in 1944 reported on 21 cases of hepatitis of varying etiology (amebiasis, malaria, syphilis) without jaundice. In the same issue of the same journal B'Tesh,[6] describing "Infective Hepatitis" in Palestine, notes that in "33 per cent a definite hepatitis existed with no obvious jaundice." In 1945 Barker, Capps and Allen [2] described their experience with acute hepatitis in the Mediterranean Theater. They observed 100 cases of acute hepatitis without jaundice, and they believe that these cases represent "a mild non-icteric form of acute infectious hepatitis," and are "at least as common" as cases with jaundice.

They recall that their study of hepatitis following yellow fever immunization at Fort Custer showed an incidence of hepatitis without jaundice approximately two and one-half times greater than the incidence of cases with jaundice. Of 5,277 men who received the vaccine, 11 per cent were jaundiced—and after the same incubation period an additional 25 per cent developed symptoms, physical findings and laboratory tests identical in nature to those cases with jaundice but milder in degree. Finks and Blumberg [11] studied the question on 255 patients among troops in a combat zone. They saw 17 cases of hepatitis without jaundice and say, "Undoubtedly the diagnosis was frequently missed during the early part of the study." Eusterman,[10] reporting on Acute Hepatitis in Civilian Practice, stated that "some observers are convinced that patients with infectious hepatitis without jaundice exceed in number those with jaundice."

In a second report on "chronic hepatitis in the Mediterranean Theater," Barker, Capps and Allen [3] discuss clinical and laboratory observations on 76 patients out of 431 who previously had had acute hepatitis with or without jaundice. Of this number, 35 had not had jaundice during the acute episode. Twenty-six of these remained without jaundice during the period of observation of the chronic stage and nine developed jaundice. It is of interest to note that the highest recovery rate occurred in the patients who remained without jaundice, indicating that they had a milder form of the disease. Numerous liver function tests were performed, all of which showed a greater number of abnormal reactions in the patients with icterus.

Pollock [14] performed liver function tests during the preicteric stage of infectious hepatitis and found evidence of liver damage in most cases several days before the appearance of jaundice. Eusterman wrote: "Liver biopsies done on the first day of detectable jaundice reveal advanced hepatitis, indicating that hepatic damage probably begins with the prodromal symptoms." Lawrence [12] reported an autopsy performed on a young man ill for 240 days with all symptoms of liver necrosis except jaundice, and he stated that results of the histological examination differed in no ways from those usually seen in jaundiced cases.

From this brief review it is obvious that many cases of infectious hepatitis without jaundice are encountered during epidemics, and it is probable that isolated cases will be met in civilian practice by practitioners who are on the lookout for such cases. The diagnosis depends upon the presence of the same symptoms as occur with jaundice, namely, anorexia, nausea, vomiting, pain in upper abdomen and back, enlarged painful liver, occasional lymphadenopathy, occasional herpes facialis, occasional splenomegaly, fever, and usually leukopenia. Only jaundice is absent. The importance of the abdominal pain has been emphasized by Bank and Cheskin [1] who report that in 14 patients without jaundice the symptoms were so acute as to lead to a diagnosis of a condition indicating surgical consultation, and in six operation was performed.

Liver function tests of all kinds have been reported—one or more are positive in all cases. Different authors employed different liver function tests, but there certainly is no unanimity of opinion as to which tests give the most information. For the purpose of this report it seems unnecessary to review the specific tests employed by various investigators. Mateer and his associates [13] recently made a detailed report on this subject. From a clinical point of view we must bear in mind that any one liver function test may show abnormalities in any given case of hepatitis without jaundice, but that not all tests need be positive in all cases. It seems to be true that the value of any given test will depend to a great extent on the particular laboratory employing this test.

CASE REPORTS

A 60-year-old white female was admitted to the Cedars of Lebanon Hospital Dec. 8, 1946. She complained of pain in the upper abdomen, vomiting, anorexia, malaise, fever for three weeks and gave an indefinite history of years of vague abdominal pain, diagnosed as "colitis." Early in December an enlarged tender liver and rigidity throughout the upper abdomen were noted, as was a marked secondary anemia and leukocytosis of 12,000 to 18,000.

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Roentgenograms of the chest and gastrointestinal tract had been negative. Blood cholesterol showed 130 mg. free, 70 mg. (54 per cent) esters.

By December 7, after three weeks of illness, the temperature was of the "septic" type. There was no jaundice, or adenopathy, but marked herpes facialis was present. The chest was clear. The liver was easily felt 5-6 cm. below the costal edge, and there was marked tenderness and muscle rigidity over the whole right upper abdomen. A soft vague mass was felt in the upper abdomen to the left of the midline, and a firmer mass—feeling like an enlarged gall bladder—at the edge of the liver to the right of the midline.

On December 14, marked change in the liver was apparent. The masses were no longer palpable, but the whole surface of the liver felt nodulated, giving the impression of metastatic malignancy.

On December 16 peritoneoscopy was performed and a biopsy specimen taken. The liver was enlarged and inferior border was rounded. In color it was a mottled reddish brown —redder than usual. Streaks of faint white were seen between reddish areas. The entire anterior surface of both lobes contained a number of cystic structures, ½ to 1 cm. in diameter, transilluminating and therefore appearing to contain fluid. Fine blood vessels were seen at the base of some cysts. Some of the cysts were bluish, some white. No solid tumors were seen. The tip of the gall bladder was bluish and thin-walled, and the remainder was obscured by omental fat. The stomach and large bowel appeared normal. The liver gave the impression of being the seat of hepatitis and/or a process in which the cysts were a feature.

Report by Pathologist: "There is a small piece of liver showing the capsule. A few liver lobules are complete. Portal areas are not remarkable except for slight thickening of the walls of the small hepatic artery branch. The liver cells show many vacuoles of variable size.

"Several small adjoining cysts separated by fibrous stroma and lined by a single layer of tall columnar epithelium. Cells are uniform in size and shape."

Diagnosis: Fat phanerosis of liver, considerable. Epithelial cysts of liver, small.

After the peritoneoscopy the liver gradually became smaller. The temperature receded. A new roentgenogram of the upper gastrointestinal tract showed it to be normal. The temperature had been dropping, and at approximately the end of the fourth week (December 16) was normal. The patient was discharged on Jan. 11, 1947. At last report (April 3, 1947) the liver was still enlarged, but there was no fever and the patient was clinically well.

The essential laboratory findings may be summarized: During the patient's illness the erythrocytes numbered between 3.3 and 3.9 million, with hemoglobin 10-12 gm. per cent, and the leukocyte count ranged from 7,100 to 17,000. The polymorphonuclear cells ran from 65 to 85 per cent, the eosinophiles from 0.5 to 5 per cent.

The icterus index was 4 units, the albumin-globulin ratio on two occasions was 2.2:3.0 gm. per cent and 2.9:2.8 gm. per cent. Prothrombin time was 16 seconds; blood cholesterol was 130 mg., 70 mg. (54 per cent) esters; blood culture was negative; results of urinalyses, except for a trace of albumin, were normal.

On April 1, 1947, a bromsulfalein test showed no retention after one hour. Protein was 8 gm. per cent, of which albumin was 4.8 gm. and globulin 3.2 gm. per cent.

CASE TWO

A 46-year-old white female entered Cedars of Lebanon Hospital, Dec. 24, 1946.

"Chills and fever" had been present for one week, the temperature was as high as 105 in the evening and normal or almost in the morning; pain occurred in the right upper quadrant with radiation to right scapula, and there were nausea, vomiting, fatigue and general malaise. The patient had first consulted a physician because she thought she had "gall bladder trouble." At that time the leukocyte count was 5,000. No change in symptoms was noted up to the time of hospitalization.

For about 20 years the patient had had symptoms suggestive of gall bladder disease such as epigastric discomfort, belching, distention, inability to eat fatty foods, pain. No cholecystograms were made. In August, 1946, she had had "herpes facialis."

At the time of admission blood pressure was 140 systolic and 90 diastolic; the pulse rate was 88 and the temperature 104.2°F. There was a generalized maculo-papular rash over arms, legs, body. At this time the patient was being given penicillin and sodium phenobarbital. A sharp liver edge was palpable a hand's breadth below the costal margin and there was exquisite tenderness over the whole right upper quadrant of the abdomen. No icterus was noted.

All medication was discontinued and on the third hospital day the rash had almost disappeared. Two days later rales were heard at the base of the left lung posteriorly. Roentgenograms of the heart and lungs were negative. On December 24, roentgenograms showed the liver enlarged 2 inches below the crest of ilium and the stomach and colon displaced to the left. No abnormal shadows were seen in the gall bladder area. The temperature varied between 104 and 99 until the 20th day of illness (January 5) when it became normal. Although the liver had gradually decreased in size, it was still large on January 10. When last seen, April 7, 1947, the patient said she felt well. There was still tenderness in the upper right quadrant of the abdomen, but the liver was not palpable. A cholecystogram taken in the interim showed no stones and a normally functioning gall bladder.

Essential laboratory findings were: Erythrocyte counts ranging between 4,590,000 and 4,230,000, with hemoglobin 11.5 to 13.9 gm. per cent, and leukocytes numbering from 5,200 to 12,800, with polymorphonuclears varying from 72 to 91.5 per cent.

The icterus index on one occasion was 8, and on another 5 units. The albumin-globulin ratio was 2.4:3.0. The Kline test was negative, prothrombin time 23 seconds; serum amylase 75 units; bromsulfalein retention 22 per cent in one hour. Results of urinalyses were negative, except for a trace of albumin. Stools were studied microscopically and no ova or parasites were found. Stool cultures were negative for the typhoid and dysentery organisms. Blood cultures, agglutinations for the typhoid and paratyphoid group and for Brucellosis, and heterophile antibody tests, all were negative. On April 7, 1947, bromsulfalein retention (5 gm. per kilo body weight) was zero in one hour.

A review of these two case histories shows some striking similarities. Both patients were acutely ill with gastrointestinal symptoms, enlarged, tender livers, high fever. One patient had previously had herpes facialis, one showed it on admission. Neither was jaundiced. Both had enough pain in the right upper quadrant of the abdomen to warrant surgical consultation to consider gall bladder disease. Both patients gradually got better without specific treatment, although with both the enlargement of the liver persisted for three months. Both showed hypochromic anemia; in one the leukocyte count varied from 5,200 to 12,800, and in the other from 7,100 to 17,000. Both showed inversion of the albumin-globulin ratio. Peritoneoscopy revealed definite liver disease in one patient, and in the other additional laboratory evidence of liver damage was shown in the bromsulfalein retention.

DISCUSSION

The disease of these two patients probably is representative of the sporadic infectious hepatitis without jaundice that has been reported by observers of epidemic hepatitis. However, the case reports of these two patients differ in one respect from the cases reported during war epidemics. Practically all observers have noted that the symptoms presented by patients having acute hepatitis without jaundice are less severe than in patients with jaundice, although they are qualitatively identical. Both our patients, however, were more severely ill than the average jaundiced patient with acute hepatitis seen in civilian practice.

The clinical picture of hepatitis without jaundice is not confined to cases of infectious hepatitis of the epidemic type seen during the war. Very recently Cohn and Lidman [8] performed many liver function tests on 15 patients with proved cases of infectious mononucleosis. All showed some definite liver involvement with one or more tests. In this series treatment for hepatitis improved the general condition and shortened hospitalization. As the patients improved, liver function tests likewise improved. As controls, Cohn and Lidman performed heterophile agglutination tests on patients with hepatitis, and hepatic function tests on patients with upper respiratory infections. In both instances the tests were negative.

If hepatitis without jaundice does occur frequently, careful clinical observation and liver function studies should reveal early stages of liver damage, during such conditions as arsenotherapy or following serum injections, before irreversible damage has been done. Prompt therapeutic procedures with modern methods in these conditions and in many others might prevent further damage to the liver and thereby result in better prognoses.

SUMMARY

1. Hepatitis without jaundice is a common occurrence during epidemics of infectious hepatitis, especially as encountered in the armed forces.

2. We report two cases from civilian practice.

3. The syndrome probably is not a clinical entity, but an expression of hepatic damage which may be produced by various agents.

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REFERENCES

1. Bank, J., and Cheskin, L. J.: Hepatitis as observed in an army general hospital, Gastroenterology, 6:357-375 (May), 1946.

2. Barker, M. H., Capps, R. B., and Allen, F. W.: Acute infectious hepatitis in the Mediterranean theater, J.A.M.A., 128:997-1003 (Aug. 4), 1945.

3. Barker, M. H., Capps, R. B., and Allen, F. W.: Chronic hepatitis in the Mediterranean theater. A new clinical syndrome, J.A.M.A., 129:653-659 (Nov. 3), 1945.

4. Blumer, G.: Infectious jaundice in the United States, J.A.M.A., 81:353-358 (Aug. 4), 1923.

5. Brookfield, R. W.: Acute hepatitis without jaundice in West Africa, Trans. Roy. Soc. of Trop. Med. and Hygiene, 38:25-33 (Aug.), 1944.

6. B'Tesh, Simon: Infective hepatitis in Palestine, Trans. Roy. Soc. of Trop. Med., 38:35-47 (Aug.), 1944.

7. Cameron, J. D. S.: Infective hepatitis, Quart. J. Med., 12:139-155, 1943.

8. Cohn, C., and Lidman, B. I.: Hepatitis without jaundice in infectious mononucleosis, Journ. of Clinic. Investigation, 25:145-151 (Jan.), 1946.

9. Dible, J. H., McMichael, J., and Sherlock, S. P. V.: Pathology of acute hepatitis; aspiration biopsy studies of epidemic, arsenotherapy and serum jaundice, Lancet, 2:402-408 (Oct. 2), 1943.

10. Eusterman, G. B.: Acute hepatitis in civilian practice, Nebraska St. Med. Journ., 31:436-444 (Nov.), 1946.

11. Finks, R. M., and Blumberg, R. W.: Epidemic hepatitis with and without jaundice. Some clinical observations on 255 patients among troops in a combat zone, Arch. Intern. Med., 76:102-113 (Aug.), 1945.

12. Lawrence, J. S.: Subacute necrosis of the liver without icterus, Lancet, 1:41-44 (Jan. 12), 1946.

13. Matcer, J. G., Baltz, J. L., Steele, H. H., Brouwer, S. W., and Colvert, J. R.: Chronic liver impairment, J.A.M.A., 133:909-916 (Mar. 29), 1947.

14. Pollock, M. R.: Pre-icteric stage of infective hepatitis, Lancet, 2:626-630 (Nov. 17), 1945.

Hemothorax in Relation to Benign Pelvic Tumors

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THE presence of ascites and pleural effusion concomitantly with ovarian tumors was first reported in 1879 by Cullingworth.[4] Although other cases were reported in the following years, the syndrome was not widely known until 1937, when Meigs and Cass [16] called attention to pleural effusion associated with fibromas of the ovary. The term "Meigs' Syndrome" is now used in this country to mean ovarian fibroma with ascites and hydrothorax.

Variations of this syndrome have been reported from time to time. Pleural effusion and ascites have been found in association with the "tumors of granulosa and theca type," [26] thecoma,[21] Brenner tumor,[12] miltilocular cystadenomata,[14,19] and fibromyomata uteri.[11] The size of these tumors has varied from that of a small orange to that of a five-month pregnancy.

The presence of hemothorax, accompanying ovarian tumors and ascites, was first reported by Salmon [23] in 1934, in connection with fibromyomata uteri with an "intraligamentous extension and follicular cysts of the ovaries." Both pleural and peritoneal effusions were sanguineous, but no malignancy was found at operation. The patient was considered cured. The next case was reported in 1940 by Vogt,[28] whose patient had both hemoperitoneum and hemothorax in association with a granulosa cell tumor at the age of 44, occurring ten years after a hysterectomy for fibromyomata uteri. This patient presented large quantities of sero-sanguineous fluid in the peritoneal and left pleural cavities. Removal of the tumor was followed by spontaneous disappearance of chest and abdominal fluid; the patient was still well six years later,[29] with no evidence of recurrence as determined by physical and roentgenological examination. A third case was reported by Rubin, and his co-workers,[22] in 1944. These writers, in summarizing 78 cases of ovarian fibromas and theca-cell tumors, found only two instances of pleural effusion and ascites, although ascites alone was a more common finding. One of their cases was associated with a theca-cell tumor accompanied by clear pleural fluid. In the other the patient was found to have bilateral hemorrhagic pleural fluid, much more pronounced on the right than the left side. The ascitic fluid was described as amber-colored. No explanation is given for the absence of blood in the abdominal fluid. The type of ovarian tumor present in this case is not known, since the patient was seen before 1936, when no differentiation was made between fibroma and theca-cell tumor of the ovary. The tumor was removed surgically, but no follow-up is given.

The purpose of this communication is to call attention to the above cases, and to record an additional case of hemothorax in association with an ovarian tumor and ascites.

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CASE REPORT

A 53-year old Italian woman was admitted to the Gynecologic Clinic Service of Stanford University Hospital on March 14, 1945, complaining of excessive growth of facial and body hair for 1 year; vaginal spotting for 2 months; swelling of the abdomen for 3 weeks; shortness of breath for 2 weeks and a dry cough for 1 week. Vaginal bleeding was minimal, and had practically stopped on entrance; abdominal and pulmonary symptoms becoming progressively more marked. The patient had not experienced weight loss, nausea and vomiting, hemoptysis, or pain. No deepening of the voice had been noted, and there was no change in libido. The patient was gravida VIII, para IV, spontaneous abortion IV. The last pregnancy was in 1928, and the last menstruation in 1941, four years prior to admission. Menarche occurred at the age of 14, with 4 to 5 day painless periods at 30-day intervals. Pelvic inflammatory disease and venereal infections were denied. There had been no severe illnesses or accidents. The left leg had been amputated below the knee in 1920 because of "milk-leg" following a pregnancy. The review of systems elicited nothing of importance.

Blood pressure was 110 systolic and 76 diastolic. Temperature was 99.6°F., the pulse rate was 70 and respiration rate 24. The face, back, shoulders, and chest were markedly hirsute, and the pubic hair followed a masculine outline. No striae or excessive pigmentation were noted. The right pleural cavity was filled with fluid; the heart was pushed to the left, and a soft systolic murmur was heard over the entire precordium. The abdomen was obese, making examination difficult, but a shifting dullness and a fluid wave were noted. No masses were palpated, no tenderness elicited, and there were no distended veins. The neurological findings were normal.

Pelvic examination revealed a moderate generalized relaxation of supporting structures. The clitoris was of normal size. A mass about 12 to 15 cm. in diameter was vaguely made out anteriorly, in the midline. It was not tender, was fairly mobile, and seemed to be firm. Leukocytes numbered 6,080, with 55 per cent segmented and 4 per cent band-form neutrophiles, 39 per cent lymphocytes, and 2 per cent monocytes. Erythrocytes numbered 5,500,000 with hemoglobin 88 per cent (Sahli). The color index was 0.80, bleeding time 2 minutes, coagulation time 4 minutes, and the sedimentation rate was at the upper limit of normal. The blood was type A, Rh negative; blood urea measured 36 mg. per cent, and serum proteins 7.9. An Addis count of a timed urine specimen was normal.

A thoracentesis was performed, yielding two liters of sanguineous fluid; several observers agreed that the blood was not due to a ruptured blood vessel caused by the needle puncture. A gastrointestinal series revealed no pathological process in the gastrointestinal tract.

On the second hospital day, thoracentesis yielded 1,700 cc. of sanguineous fluid, more bloody than the previous specimen. Roentgenograms showed complete collapse of the right lung, with a fluid level at the eighth rib; sella turcica normal; bone survey normal. Intravenous urography showed no urinary tract disease and no evidence of adrenal enlargement. The 17-Ketosteroid level was 21.3 mg. in 24 hours. (In our laboratory 18 mg. is considered upper limit of normal for females.) A Wassermann test of the blood was negative.

A roentgenogram on the sixth day showed an increase of fluid in the chest, but still no evidence of thoracic malignancy. Sanguineous fluid was drained by thoracentesis at intervals during the following six days, on the 12th day 100 mg. of radium was placed on the uterus for 15 hours (1,500 mg. hours). At this time a histologic picture of the endometrium, prepared by the "frozen section" method, showed

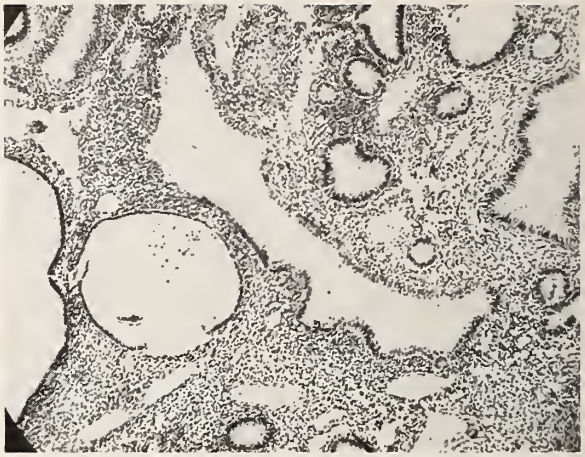


Figure 1.—Hyperplasia of the endometrium, with dilated glands forming the typical Swiss-cheese pattern.

hyperplasia (Figure 1). A roentgenogram taken the following day, after 1,350 cc. of sanguineous fluid had been drained showed fluid level still at the eighth rib and a complete rib atelectasis.

On the 16th day, when 1,500 cc. of sanguineous fluid was withdrawn from the chest, analysis showed it to have a Sahli hemoglobin value of 2 to 3 per cent, specific gravity of 1.024, and protein content of 4 gm. per cent. No malignancy or acid-fast bacilli were demonstrated in smears and "buttons" from pleural fluid which had been taken previously for study. There was no reaction to a tuberculin injection. Three days later, the 19th day of hospitalization, examination of the blood showed an extremely rapid sedimentation rate. Leukocytes numbered 9,280, with 76 per cent segmented and 8 per cent banded form neutrophiles, 10 per cent lymphocytes, and 6 per cent monocytes. Hemoglobin was 52 per cent (Sahli) and although a transfusion of 500 cc. of whole blood was given, the patient's condition continued rapidly downhill.

Laparotomy was considered contraindicated and a course of deep radiation therapy to the pelvis was started. A little more than a week later, the patient's condition was definitely better. Although thoracentesis had not been done since the beginning of radiation therapy, there was no increase in the amount of fluid in the chest. Slight hemoptysis noted at this time did not last.

Upon completion of a 20-day course of radiation therapy, the patient was remarkably improved with a weight loss of 30 pounds, much of it from the abdomen. No further thoracentesis was necessary. The pelvic mass now was made out to be oval in shape, of firm consistency, and reaching half way to the umbilicus, with the apex 3 cm. to the right of the midline. It was still indistinguishable from the fundus of the uterus.

The patient was sent home to recuperate, with surgical operation planned later. Roentgenographic examination a month after discharge from hospital showed the lung fields clear and no evidence of neoplasm or fluid. Hirsutism was disappearing from all parts of the body, the pelvic mass was slightly smaller and the patient said she felt well.

After about six weeks for recuperation, the patient was readmitted to hospital. The pelvic mass then was about twice the size of a normal uterus. Results of laboratory studies were not remarkable except for a sedimentation rate of twice the upper limit of normal value.

Upon laparotomy, a left ovarian tumor 7x5x6 cm. was found, fastened by light adhesions to the fundus of the uterus, the cecum and the appendix, and a bilateral salpingo-

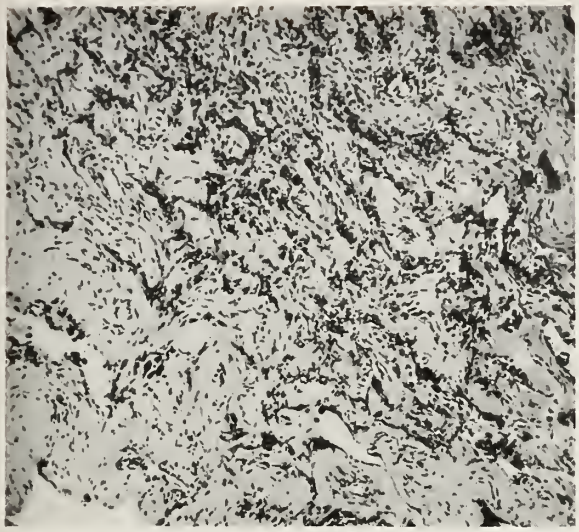


Figure 2.—Low-power view of section giving the appearance of granulosa-cell tumor, with cell-clusters and anastomosing columns.

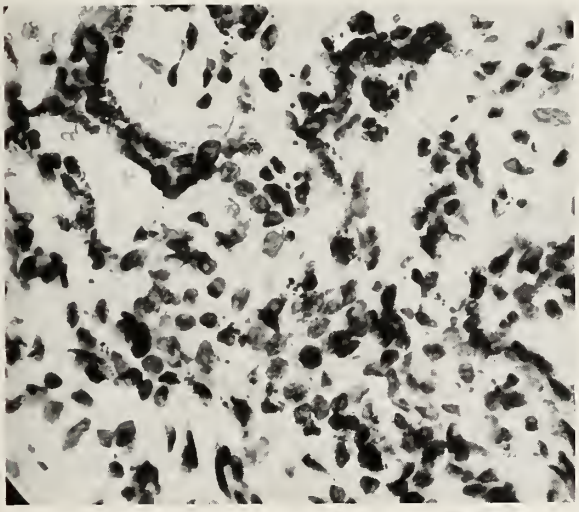


Figure 3.—High-power view of area from Figure 2.

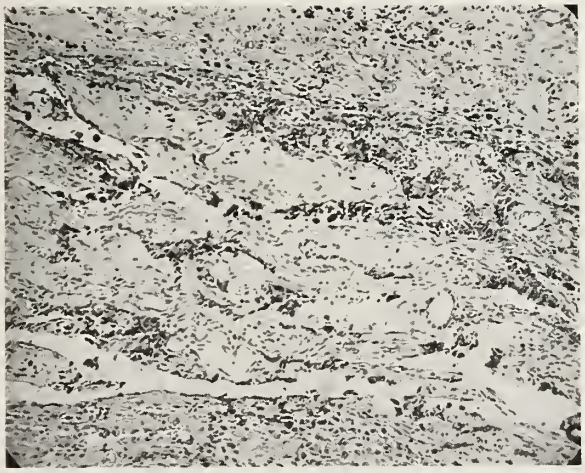


Figure 4.—Low-power view of section giving the appearance of arrhenoblastoma.

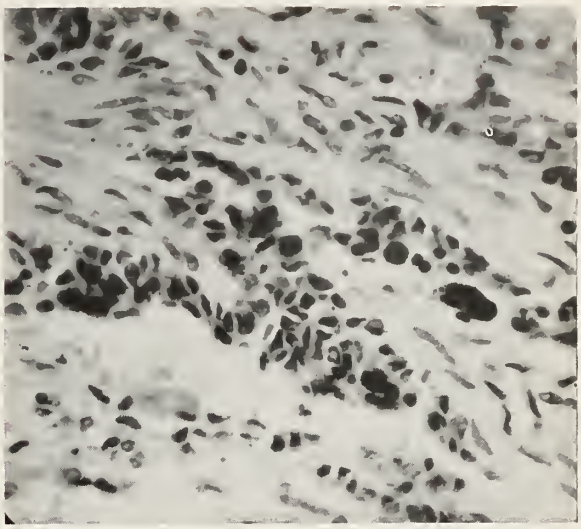


Figure 5.—High-power view of area from Figure 4.

oophorectomy was performed. No other abnormal process was found in the peritoneal cavity. The postoperative course was uneventful.

There has been close follow-up of this patient since the operation. The abnormal hair growth has entirely disappeared except for a few scattered hairs over the upper back. A mild menopausal syndrome has been well controlled by psychotherapy. Two 17-Ketosteroid determinations were done eight months after discharge from the hospital. One showed 19.4 mg. and the other 10.2 mg. in 24 hours. Another, 21 months after the first, was 16.1 mg.

The tumor was 7x5x6 cm. in size, cystic, and containing dark brown, brittle material with some scattered areas of light gray, firm tissue; the other ovary was atrophic. Histologically, the pattern was quite confusing, because of the irradiation to which it had been subjected. Almost the entire tumor was replaced by necrotic tissue debris. Even in areas in which fairly normal cell groups were found, pyknosis and karyorrhexis were present. Most areas gave the appearance of a granulosa cell tumor of cylindromatous type (Figures 2, 3), with anastomosing columns and cell clusters. In a few areas, however, the cells in the columns had the sex-cord appearance seen in arrhenoblastomas (Figures 4, 5), with the various types of concave lens-shaped nuclei. The clinical syndrome caused further confusion as to the diagnosis. Sections were sent to Dr. Emil Novak and his opinion requested. He believed it to be a granulosa-cell tumor.[20] Emge,[6] however, believes that arrhenoblastoma cannot be excluded. Repeated inspections of the slides make it seem that elements of both types of tumor are present.

COMMENT

There are four important aspects to this problem which should be commented upon.

1. *Origin of the ascites and pleural fluid.* The problem of the original of these effusions has not yet been settled. The "alarm reaction" of Selye is often mentioned, but usually discarded. The consensus today is that the pleural fluid comes from the peritoneal cavity, and that the ascites arises from the tumor itself. This is explained as due to obstructed efferent venous and lymphatic vessels, caused either by a twisting of the pedicle or pressure of the tumor mass itself upon the vessels. The rarity of ascites accompanying fibromyomata uteri can also be explained by this theory, when the coverings of the two types of tumor are considered.

The uterine tumors are usually encased in a dense fibromuscular capsule, then covered by a well-formed, intact serosa, while the ovarian tumors are covered only by the germinal epithelium, which in the normal state is columnar or cuboidal in structure, and therefore possibly transmit fluid more easily. There are, of course, cases of uterine tumors with concomitant ascites. Some of these may be explained by intraligamentous extension, necrosis, or subserous position of the tumor with a thinned-out capsule, but some still defy explanation.

That the fluid which forms ascites can come from the tumors has been indicated by Geibel,[18] who placed a 3,200 gm. ovarian tumor in a dry vessel; 24 hours later the tumor weighed 2,050 gm., and the vessel contained the difference —a clear, yellowish fluid. This does not help in the determination of the cause of extravasation of fluid, but it does show that the fluid can easily be transmitted through the capsule. Calmenson, Dockerty, and Bianco,[2] in a recent report of all cases of Meigs' Syndrome from the Mayo Clinic, noted that in 51 cases of ascites 49, or 96 per cent, showed intercellular edema in the tumor or its pedicle, while in only 10 per cent of the cases without ascites was extravasation found. These writers also pointed out the large size of tumors associated with ascites; there was a 16 cm. average diameter in their series, and no small tumors were ever associated with effusion. This factor, however, is not necessarily related to exudation of fluid from the tumor itself; it could just as well be a part of the genesis of the alarm reaction.

That pleural fluid, in the absence of metastatic growth in the chest, comes from the peritoneal cavity, is accepted today as a fact. It is believed that the ascitic fluid crosses the diaphragm through lymphatic channels, more commonly into the right pleural cavity because of the better-developed passages on that side. In two of the four reported cases of hemothorax, the peritoneal fluid was also bloody—Vogt's granulosa cell tumor, and Salmon's fibromyomata uteri. The fibroma or thecoma with hemothorax reported by Rubin and his co-workers was accompanied by amber-colored ascitic fluid, a finding the authors could not explain. In the case reported in this paper, no paracentesis was performed since there was never a bothersome distention of the abdomen. At the time laparotomy was performed, all effusion had ceased due to the irradiation. It can be surmised that hemoperitoneum was present, due to either temporary twisting of the pedicle or to necrosis, because of the presence of adhesions of the tumor to adjacent structures. In Rubin's patient, it is possible that a hemoperitoneum had been present, due to a similar cause, but that the blood had been absorbed more rapidly from the peritoneum than from the pleura.

2. *Malignancy.* Of the four known cases of hemothorax in association with pelvic tumors, none so far has been reported to be malignant. The uterine fibroma was benign; the tumor reported by Rubin was also benign. The two granulosa-cell tumors were benign in that after two years, in this case, and six years in that of Vogt, no evidence of recurrence was seen, but these tumors are noted for their ability to recur many years later—up to 21 years. The presence of hemothorax, when not due to trauma, and especially in the presence of a known tumor elsewhere in the body, has for so many years brought to our minds the presence of pleural metastatic malignancy that it is difficult to give up this opinion. It is this prevalent idea that caused the extensive search for a malignant tumor in the present case.

Meigs states that no instance of hemothorax in association with a benign ovarian tumor has been called to his attention.[17] It is safe to state that occurrence of the syndrome is rare and that hemothorax is not invariably a corollary of malignancy.

3. *Hormonal influence.* The endocrine secretion of arrhenoblastomas, theca-cell, and granulosa-cell tumors is well known. The case presented in this paper, however, is somewhat confusing; the patient complained of both hirsutism and vaginal spotting, and the diagnostic procedures disclosed not only a slight elevation in the 17-Ketosteroid determination but also a hyperplasia of the endometrium. This confusion was made more understandable by the histological picture of the tumor, in which the differentiation between arrhenoblastoma and granulosa-cell tumor was extremely difficult. This is not a new situation. Traut and Butterworth[27] point to a case reported by Casacesco[3] and an unreported case seen by Studdiford, in which masculine hair distribution, deepening of the voice, amenorrhea, hypertrophy of the clitoris, and other evidences of masculinization were seen. These symptoms, clinically suggestive of arrhenoblastoma, turned out to be caused by a luteoma in one case and a granulosa-cell tumor in the other. There is a growing list of such cases, many of which are found to be caused by tumors such as the one presented here, or by tumors which are unmistakably mixtures of arrhenoblastoma and granulosa-cell tumor, and often listed as gynandroblastomas.[1,7,15,26] It has also been repeatedly urged, because of the presence of cartilage and entodermal epithelium in the tumor or a dermoid tumor of the other ovary, that these neoplasms should be classed as teratomata.[8,10,13] As additional cases of this type accumulate, the term "mesenchymoma" seems to be a more apt designation. Schiller[25] points out that both arrhenoblastomas and granulosa-cell tumors develop from an indifferent mesenchyme, duplicating the earliest embryonic phase of the gonad. This is Robert Meyer's definition of the gynandroblastoma, a designation rarely used, although the entity now seems more common than even Meyer had considered. Perhaps all of these tumors are "gynandroblastomas" or "mesenchymomas," although having, in most cases, one type of cell so predominant that other forms are overgrown or missed in the selection of material for histological examination.

4. *Radio-sensitivity.* The tumor described here proved to be markedly radio-sensitive. On this basis another similar patient in our service has subsequently been treated by preoperative irradiation, with gratifying results. Similar reports have been published from several sources.[9,24] However, there are also reports of failure[24] and of primary shrinking of the tumor followed by radio-resistant growth.[9] That granulosa cells are extremely sensitive to x-ray has been noted many times; Traut and Butterworth[27] irradiated the ovaries of mice, finding the granulosa cells at first depressed, and later stimulated to over-growth—even to the point of the formation of granulosa-cell tumors. These writers called attention, at that time (1937), to the frequency of the occurrence of granulosa-cell tumor in women who had had previous irradiation. Such a situation is exemplified in a report by Dockerty and MacCarty[5] of a patient with a granulosa-cell tumor removed three years after she had been given a "sterilizing dose" of radium, because of post-menopausal bleeding. Such occurrences are sufficiently frequent that Traut and Butterworth more than ten years ago warned against the indiscriminate use of irradiation as a sterilizing measure. Nevertheless, the beneficial effects in certain cases, as the one presented here, cannot be overlooked. To this patient it was life-saving.

Postoperative irradiation is useful when the tumor is too large to be removed,[9] as is also the case when the patient's condition is too poor for laparotomy. The use of x-ray following complete removal of these tumors has not yet been reported; a large series of such cases would have to be followed for 20 years before any conclusions could be reached concerning the incidence of latent recurrence.

SUMMARY AND CONCLUSIONS

A case has been presented of an ovarian tumor, with both masculinizing and feminizing features present in the clinical syndrome. The histological picture, indistinct because of irradiation changes, is compatible with both arrhenoblastoma and granulosa-cell tumor; it should probably be classified as a mesenchymoma. Ascites and bloody pleural fluid were also present with no metastases; the effusions disappeared after removal of the tumor. Three previously-reported cases of hemothorax occurring in conjunction with benign pelvic tumors were reviewed. A short discussion was given of the theories of the origin of the effusions, the radio-sensitivity of granulosa-cell tumors, and the genesis and hormonal influence of these and allied tumors.

It seems apparent that:

1. The presence of hemothorax in association with pelvic tumors is not necessarily indicative of malignancy.

2. Surgical operation is indicated unless advanced malignancy is proved.

3. Pre-operative irradiation of pelvic tumors may be extremely useful when immediate operation is not judicious.

4. Mesenchymomas may cause masculinizing or feminizing changes, or both; the predominant type of cell seen in the tumor may not correspond to the clinical syndrome.

REFERENCES

1. Black, W. C.: Am. J. Path., 18:766, 1942.

2. Calmenson, M., Dockerty, M. B., and Bianco, J. J.: Surg., Gyn., and Obst., 84:181, 1947.

3. Casacesco-Draganesco: Presse Med., 39:1264, 1931.

4. Cullingworth, C. J.: Tr. Obst. Soc. London, 21:276, 1879.

5. Dockerty, M. B., and MacCarty, W. C.: Am. J. Obst. and Gyn., 39:147 (Jan.), 1940.

6. Emge, L. A.: Personal communication.

7. Hartz, P. H.: Am. J. Path., 21:1167 (Nov.), 1945.

8. Johnson, C. G.: New Orleans M. and S. J., 97:526 (June), 1945.

9. Jones, G. E. S., and Te Linde, R. W.: Am. J. Obst. and Gyn., 50:691 (Dec.), 1945.

10. Kanter, A. E., and Klawans, A. H.: Am. J. Cancer, 40:474 (Dec.), 1940.

11. Kelly, H. A., and Cullen, T. S.: Myomata of the Uterus, p. 30, 1909. Saunders, Philadelphia.

12. Kilemen, E.: Am. J. Obst. and Gyn., 47:275, 1944.

13. Krock, F., and Wolferman, S. J.: Ann. Surg., 114:78 (July), 1941.

14. MacFee, W. F.: Ann. Surg., 113:549 (April), 1941.

15. Mechler, E. A., and Black, W. C.: Am. J. Path., 19:633 (July), 1943.

16. Meigs, J. V.: Personal communication.

17. Meigs, J. V., and Cass, J. W.: Am. J. Obst. and Gyn., 33:249 (Feb.), 1937.

18. Miller, J.: Handk. d. Spec. Path. Anat. and Phys. of Lubarsch-Henke, Vol. VII/3, 1937.

19. Millett, J., and Shell, J.: Am. J. Med. Sci., 209:327 (March), 1945.

20. Novak, Emil: Personal communication.

21. Perlmutter, M.: Ann. Int. Med., 20:132 (Jan.), 1944.

22. Rubin, I. C., Novak, J., and Squire, J. J.: Am. J. Obst. and Gyn., 48:601 (Nov.), 1944.

23. Salmon, U. J.: J. Mt. Sinai Hosp., 1:169 (Nov.-Dec.), 1934.

24. Schulze, M.: Am. J. Obst. and Gyn., 26:627 (Nov.), 1933.

25. Shiller, W.: Discussion of Black, W. C. (19).

26. Traut, H. F., and Marchetti, H. A.: Surg., Gynec., and Obst., 70:632 (March), 1940.

27. Traut, H. F., and Butterworth, M. M.: Am. J. Obst. and Gyn., 34:987 (Dec.), 1937.

28. Vogt, C. J.: Am. J. Obst. and Gyn., 40:285 (Aug.), 1940.

29. Vogt, C. J.: Personal communication.

California Cancer Commission Studies*

Chapter XVII

Carcinoma of the Esophagus

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CARCINOMA of the esophagus is a common disease. It ranks fourth in frequency among malignant tumors occurring in males beyond the age of 20 years, being surpassed in frequency only by carcinoma of the stomach, lung, and rectum. This disease represents about 7 per cent of all carcinomas affecting the alimentary tract. Cancer of the esophagus causes 3 to 4 per cent of all deaths from cancer, and in this country at least 2,000 people die annually of this disease. Esophageal carcinoma occurs much more frequently in the male than in the female. Between 80 and 85 per cent of all cases are in men.

Carcinoma of the esophagus is rarely observed before the age of 40, the peak incidence occurring in the 20-year span between 50 and 70. In men, approximately 10 per cent of esophageal cancers arise in the upper third of the esophagus, 40 per cent in the middle third, and 50 per cent in the lower third. In women, the incidence is 30 per cent in the upper third, 35 per cent in the middle third, and 35 per cent in the lower third. Gastric carcinoma arising in the cardia closely resembles cancer in the lower third of the esophagus. Eighty per cent of the lesions arising in the cardio-esophageal area are primarily adenocarcinomas of the stomach secondarily invading the esophagus; the remainder are epidermoid cancers primary in the esophagus. Ten per cent of all gastric carcinomas arise in the cardia.

Ninety per cent of the cancers of the esophagus are epidermoid (squamous cell) in type (Figure 1). Adenocarcinoma too (Figure 2) may arise in the esophagus and above the level of the cardia. These adenocarcinomas make up approximately 10 per cent of the total. They have their origin either in a tongue of gastric mucosa which extends upward from the region of the cardia into the lower esophagus, or from an island of aberrant gastric mucosa. These islands may occur at any level in the esophagus.

A point of extreme importance in this disease is that in at least 25 per cent of patients with carcinoma of the esophagus studied at necropsy there is no metastasis at the time of death. Death in these cases is caused either by direct extension of the tumor into a vital structure (the thoracic aorta and left main bronchus are frequently perforated by direct extension of the tumor) or by other non-related serious organic diseases.

Metastases are chiefly distributed by the lymphatics, and more rarely by the blood stream (Figure 3). When the lesion involves the upper two-thirds of the esophagus the secondary glandular deposits are found in the mediastinal, parabronchial and deep cervical nodes. The lesions in the lower third spread into the nodes along the lesser curvature of the stomach. Distant metastases involve the lung and pleura in 30 per cent of cases, the liver in 16 per cent, and the other organs to a lesser extent. Many patients exhibit lymph node metastases when first observed and in these cases mediastinal compression of the trachea and bronchi may occur. This compression may result in perforation of the trachea with paroxysms of coughing on swallowing liquids. Later, bronchopneumonia and pulmonary gangrene may supervene. Similar pulmonary complications follow aspiration of regurgitated material by patients with stenosis at the site of the primary lesion. Unilateral vocal cord paralysis from involvement of the recurrent nerve either by direct extension of the tumor of from secondary glandular deposits signifies in-

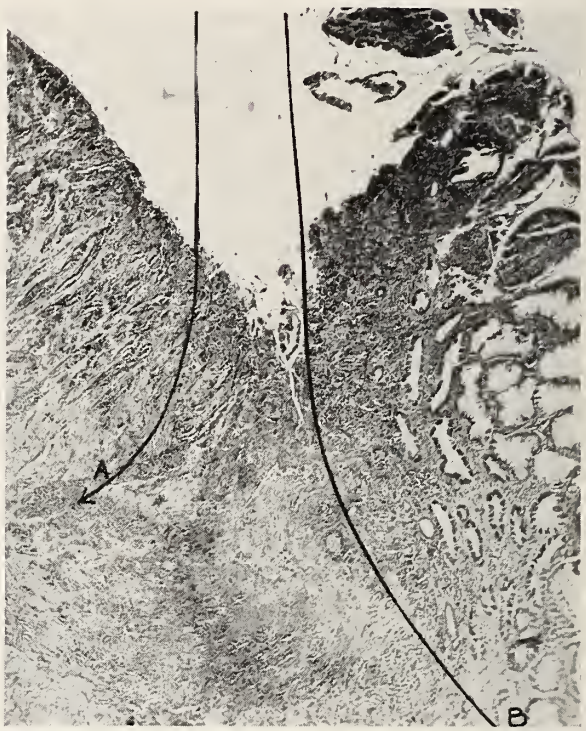


Figure 1.—Microscopic section of a squamous cell carcinoma of the lower end of the esophagus. This section shows the squamous cell tumor (A) ulcerating the adjacent gastric mucosa (B). X50.

* Organized by the Editorial Committee of the California Cancer Commission.

operability in a high percentage of patients. This also is true in those patients presenting a Horner's syndrome from involvement of the cervical sympathetic nerves.

SYMPTOMS

There is only one important symptom in carcinoma of the esophagus, and that symptom is *dysphagia. Any patient 40 years of age or over who complains of difficulty in swallowing should be considered as suffering from a carcinoma of the esophagus until this is proven untrue.* In the beginning, the dysphagia may be caused only by coarse or poorly masticated foods. Often this symptom is presented as an uncomfortable sensation of "something sticking under the breast bone." Substernal pain follows dysphagia as an important early symptom. This symptom may be expressed as "heartburn' or vague distress in the upper abdomen. Regurgitation, hematemesis, hoarseness, cough, thoracic back pain, weight loss, anemia, and dehydration are all late symptoms and signs. The one and only significant point in the early diagnosis of carcinoma of the esophagus is that the very first doctor who sees a patient with some change in the swallowing act must consider that patient to have a cancer of the esophagus until this can be disproved.



Figure 2.—Microscopic section of an adenocarcinoma arising in the cardiac end of the stomach. This section shows the tumor (B) infiltrating beneath the mucosa (A) of the lower end of the esophagus. X50.

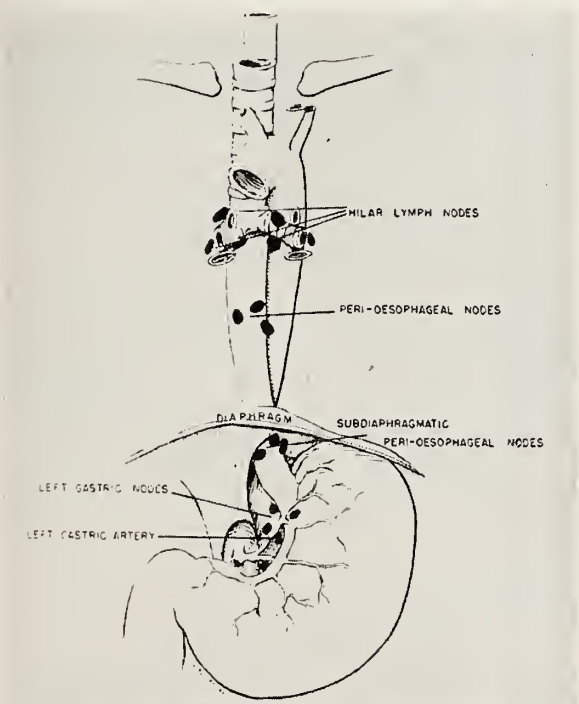


Figure 3.—The most frequent sites of lymph node invasion in cases of carcinoma of the esophagus. (Reproduced from an article by Richard H. Sweet, M.D.).

DIAGNOSIS

Thorough roentgen ray investigation with the use of thin and thick mixtures of barium will usually disclose even very small filling defects in the esophageal mucosa. Cardiospasm, strictures, or scars from corrosive fluids, impacted foreign bodies, diverticula and benign ulcers of the lower esophagus can all be considered after carcinoma has been ruled out. The esophagoscope will prove or disprove the diagnosis of carcinoma in the vast majority of cases. This instrument can usually be introduced after the pharynx is locally anesthetized. General anesthesia is occasionally required for the highly nervous patient. A satisfactory biopsy specimen usually can be obtained through the esophagoscope. The only area where difficulty is encountered is the cardio-esophageal junction (Figures 4 and 5). Occasionally carcinomas in this region produce so much stenosis that the esophagoscope cannot be introduced deep enough to permit visualization of the abnormal tissue, and in such a case there is not sufficient lumen to permit



Figure 4.—This is the roentgen film of a proven case of benign cardiospasm. Note the similarity of the contour of the obstruction (A) to (B) in Figure 5.



Figure 5.—This is the roentgen film of a primary carcinoma of the cardiac end of the stomach with invasion into the lower end of the stomach. Compare (B) with (A) in Figure 4. (Figure 2 is a microscopic section of this tumor.)

the biopsy forceps to penetrate into the actual malignant growth. In such circumstances the diagnosis must always be carcinoma until it can be disproved by transthoracic exploration.

In any case in which there is a history of dysphagia, esophagoscopic examination should be carried out to prove or disprove the presence of carcinoma, even though roentgenogram findings have been negative. The esophagus is one area of the gut that can be examined throughout its length by the human eye. There is no examination that can replace actual visualization of the lesion. Procrastination in the use of the esophagoscope to diagnose carcinoma of the esophagus is a serious error: Esophagoscopy, when indicated, should be as routine as examining the throat with a tongue depressor!

TREATMENT

The only curative treatment known today for cancer of the esophagus is radical excision of that segment of the esophagus containing the carcinoma. Such treatment is feasible only in early lesions. The successful management of cancer of the esophagus rests for the most part with the physician who first sees the patient. If that physician assumes that a patient with cancer of the esophagus cannot be saved and that deep roentgen ray therapy is the only treatment of any value, then there will be no improvement in the surgical results because the lesion will always be too far advanced when the surgeon finally exposes the tumor at the operating table. It is the belief of many observers that 25 per cent of cases of carcinoma of the esophagus could be operable if the physician who first saw that patient was aware of the pitfall of procrastination and made a thorough study of any patient with even a slight abnormality in swallowing. If the physician insists that such patients be examined both roentgenographically and endoscopically, there will be more diagnoses of carcinoma of the esophagus in an operable stage. The diagnosis established, the patient should be put under the care of a surgeon who has had training in this field.

The surgical management of cancer of the esophagus has progressed rapidly in the past ten years. The three most important factors directly affecting this progress are anesthesia, blood transfusions and the routine use of penicillin and the sulfa group of drugs. Intratracheal anesthesia (Figure 6) provides a stabilization of the mediastinal contents and a proper expansion of the lungs that permits the thorax to be widely exposed for operations that require many hours. Recently, curare has been introduced to provide muscular relaxation and the advent of this technique appears to be a distinct advance.

The more general use of blood transfusions, particularly during the operative procedure, has resulted in well maintained blood pressure, pulse and respiration during the six to eight hours the operation takes.

Penicillin and one of the sulfa compounds administered to the patient before and during the operation and throughout the postoperative period has greatly reduced the incidence of infection. Serious infections were a principal cause of mortality and morbidity in esophageal resections before the introduction of these agents.

At present most surgeons interested in this field have come to adopt the principle of restoration of the continuity of the gastrointestinal tract whenever this is at all feasible. It has been the experiences of many that the stomach functions very well even when placed in the thorax above the level of the aortic arch (Figure 7). When the tumor occupies the lower end of the esophagus and most of the

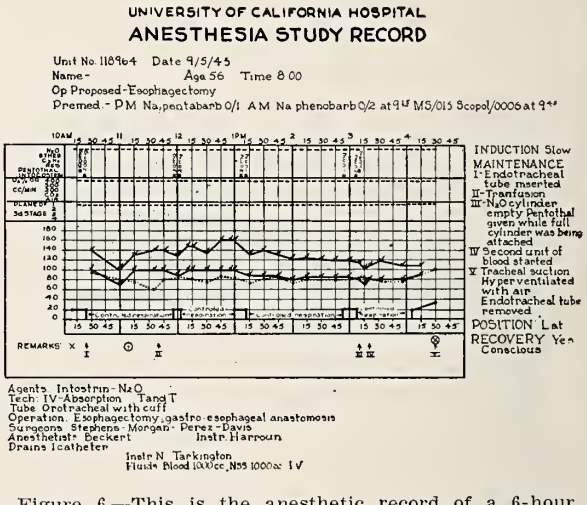


Figure 6.—This is the anesthetic record of a 6-hour operation. (Resection of the distal one-third of the esophagus and the proximal half of the stomach with reanastomosis of the esophagus to stomach.) The notched lines are blood pressure readings and the dotted line, the pulse rate. Note the slight change in blood pressure and pulse throughout this long procedure.



Figure 7.—Roentgen film of the thoracic stomach following resection of the distal half of the esophagus and reanastomosis of esophagus to stomach anterior to the aortic arch. The arrow points to the new cardio-esophageal junction. It is now over nine months since operation and this patient is very comfortable.

stomach, end-to-side union of the esophagus to the jejunum, as described by Sweet, provides a satisfactory result. Fortunately, carcinoma arises infrequently in the upper end of the esophagus, but here resection and reestablishment of continuity of the swallowing tube can be accomplished after the method of Wookey.

As to the management of the inoperable case of carcinoma of the esophagus, it is the author's belief that gastrostomy is not indicated and that the esophagus can be kept open by means of dilatation of the tumor-bearing area under the direct vision of the esophagoscope. This permits the patient to swallow soft foods and liquids in his dying days. The author

Cancer of Esophagus

	Cases	Hospital Deaths
Resection with Reanastomosis....	7	0
Exploratory without Operation....	8	0
Total.....	15	0

Cancer of the Stomach

	Cases	Hospital Deaths
Resection with Reanastomosis....	5	1
Exploratory without Operation....	6	0
Total.....	11	1

1 hospital death in 26 operated cases.

TABLE 1.—This is a summary of the consecutive operative cases at the University of California Hospital for a period of approximately 1½ years, terminating in June, 1946. The stomach carcinomas were all in the cardiac end and were approached via the transthoracic route. One death in 12 resections gives an 8.3 per cent mortality rate of resection. Exploratory thoracotomy without resection resulted in no deaths. The mortality rate of resection in a comparable group of 16 cases reported by Stephens in 1941 was approximately 70 per cent.

believes that x-ray therapy has no place in the management of cancer of the esophagus, and it hardly seems fair to either the patient or the roentgenologist to expect results after the fact of inoperability has been established.*

SUMMARY

Carcinoma of the esophagus is a disease of relatively high incidence. The male particularly is likely to be stricken with this disease between the ages of 50 and 70. The diagnosis can be made easily and reasonably early if the doctor to whom the patient first describes symptoms visualizes the esophagus by roentgenographic examination and the esophagoscope in every patient complaining of dysphagia no matter how slight the severity of this symptom. Excision of the cancer and restoration of gastrointestinal continuity is usually possible in the operable cases, with excellent chance of the patient's surviving the operation of esophagectomy (Table 1).

* Not by Editorial Committee: Some radiologists are of the opinion that x-ray therapy may produce good palliation, especially for the upper end of the esophagus.

* * *

"Oral Cancer," By George S. Sharp, Chapter XII in the California Cancer Commission Studies, will appear in this section of the June issue of CALIFORNIA MEDICINE.

California MEDICINE

OWNED AND PUBLISHED BY THE CALIFORNIA MEDICAL ASSOCIATION
450 SUTTER, SAN FRANCISCO 8 PHONE DOUGLAS 2-0062

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EDITORIALS

The Laboratory and Diagnosis

One hundred and twenty-five years ago a young man named Laennec was scoffed out of Paris because he dared to say that disease had a basis in anatomical changes. The leader of the French Medical Faculty and so-called philosophical school, Broussais, maintaining that Laennec's views were heretical, stated that all disease was due to a deficiency within the body.

One hundred years later Minot in Boston concluded that pernicious anemia was caused by a deficiency state. However, although this conclusion accorded in this one particular with Broussais' so sweeping doctrine, it had been reached by the avenue suggested by Laennec. Broussais' school of thought was philosophical, augmentative, and clinical, with no positive proof. That espoused by Minot was scientific and its accepted conclusions were backed by scientific proof, for Laennec, although he died young, had left pathology to posterity. The medical world soon recognized that diagnosis and treatment of disease depended upon a knowledge of its appearance in and effect upon organs and tissues.

The bacteriological era was to follow and to be associated with a knowledge of diseased tissue. Soon many acute diseases were to be found due to bacteria, and these discoveries inspired such geniuses as Pasteur and Behring to give us means of prevention and cures for rabies and diphtheria. Serology naturally followed the substantiation of the "germ theory." But years of development of knowledge through pathology, bacteriology and serology still left the world without cures for certain diseases.

Then came chemotherapy and the miracle sulfa drugs which reduced pneumonia from the greatest death dealing disease to a practically innocuous illness. And now comes the antibiotic age with Fleming's penicillin and Waksman's streptomycin to render syphilis, gonorrhea and perhaps even some cases of tuberculosis curable by specific therapy.

Through all this medical progress, roentgenology shines as a great diagnostic and at times therapeutic beacon. We who live in this age of miracle medicine owe gratitude to our medical forebears for their great discoveries making our diagnosis and treatment of disease a far easier task than was theirs. These important discoveries came through the laboratory, pathological, clinical and roentgenological. Insulin was discovered by a clinician and laboratory man, but only after Langerhans and his disciples had done a quarter century's work on the pancreas.

These scientific gentlemen of the past and some of the present were sound clinicians. They knew medicine and used the laboratory as adjuvants to prove a diagnosis, not make one. They believed in careful history taking and physical examination and complete analysis of a patient's condition before receiving laboratory reports. A great clinician once said, "A part of the diagnosis should be made as the patient walks into your office, 75 per cent of it when you have completed your history." Clinicians of the Osler type depended more on their knowledge of disease than upon laboratory findings.

How far have we drifted today from former concepts? Is the modern physician becoming an automaton, permitting the laboratory to direct his entire thinking and make a diagnosis which he accepts blindly? It is to be emphasized that the greatest development in the practice of medicine has been in clinical and roentgenological laboratories. Except in the case of isolated obscure diseases, however, the reports of the laboratory should clinch the diagnosis, not make it. The laboratory is no Aladdin's lamp but merely a guide. During the war many mistakes were made in reports on roentgenological findings which have never been corrected. Every shadow or area of fibrosis in a lung field is not necessarily tuberculosis. City health departments through their social service division have excluded children from

school because a mother during a mass x-ray survey was found to have an old lesion under a clavicle. The roentgenological report said "tuberculosis"—the doctor did not differentiate healed, innocuous tuberculosis from the active form. A trace of sugar in the urine does not necessarily mean diabetes, nor a trace of albumin, nephritis. A high metabolic rate may not mean hyperthyroidism. A high cholesterol content of the blood, or an increase in uric acid content, may be significant but not unless it corroborates an existing clinical picture. Even a carefully read electrocardiogram of suspicious implication does not prove that a coronary occlusion has occurred, for we know that such diagnoses have been proven wrong at autopsy. Tinsley Harrison recently stated that every pain in the chest does not have to be the result of a coronary occlusion.

The average practicing physician may be unable to make his own interpretations of complicated laboratory findings or to read x-ray films and therefore may blindly accept the report he receives. A physician recently told a patient that she had pulmonary tuberculosis. The patient asked, "Aren't you going to examine me or look at my sputum?" The doctor replied, "Examination is unnecessary; the x-ray findings are all I need." This is a true happening and emphasizes very well some of our trends today. In many cases, laboratory reports are being used to make a diagnosis. Some physicians seem to be losing the clinical intuition of the old medical masters.

It should not be forgotten that a patient is a human being with organs, blood and secretions and that these often function in ways beyond our ken. We are losing the art of analysis and discussion. We are no longer training ourselves to be clinicians attempting to make a diagnosis from the patient's statements, the physical and laboratory findings, and our own analysis and deductions. All honor and recognition to the laboratory for its part in present accomplishments. But let it become the physician's guide and assistant, not the director of his thinking. Let the physician remain his own master in diagnosis.

1948 Annual Session

With the journal going to press just at the close of the 1948 Annual Session of the California Medical Association, time is short for a comprehensive review of the meeting but a few highlights may be touched upon at this time pending a complete report in a later issue.

Scientifically, the meeting appears to have been one of the finest ever conducted by the Association. Six guest speakers took part, along with invited guests from outside the Association and well-balanced groups of members reporting on their own findings. Public interest in the scientific sessions is attested by the prominence given by California newspapers to stories on the meeting, in competition with presidential primaries, the atomic bomb, American-Russian relations and other news of world import.

Guest speakers included prominent physicians invited by the sections on general medicine, general surgery, anesthesiology and dermatology and syphilology, together with the Association president's guest and Doctor George F. Lull, secretary and general manager of the American Medical Association. This large and important list of speakers argues well for the continuance of the plan inaugurated this year for more guests at annual meetings.

On the business side, the House of Delegates held its usual meetings, considered six proposed constitutional amendments, looked into the reports of two important interim committees appointed following last year's meeting, and studied thirty-two resolutions brought in as new business. Five of the resolutions emanated from the Council and were favorably received by the House. These included a memorial to the A. M. A. for medical preparedness for both civilians and military forces in time of war, a proposal to establish a statewide committee to study the problems of chronic alcoholism, the naming of a reference committee on finances of the House of Delegates to study financial reports and consider a new budget with dues for the coming year, and two technical by-law amendments to require that members must maintain their membership in the counties in which they maintain their principal offices of practice.

Among the resolutions offered from the floor were several on the question of rebates, one on a proposed probe of the Association's public relations activities, and others on a variety of subjects too extensive to detail here. In the final analysis it may be said that the House of Delegates voiced approval of the manner in which the Association's affairs have been handled by the Council, meanwhile giving ear to proposals of Delegates which suggested counter activities.

A look at the list of thirty-two resolutions placed before the House of Delegates and a study of the reference committee's report and recommendations on them cannot but impress any member with the thoroughgoing manner in which the Association handles its organizational affairs. The variety of subjects offered, the intense and time-consuming study made by the reference committees, the list of witnesses appearing on both sides of every controversial matter, gives new emphasis, if any is needed, to the fact that the California Medical Association operates on the basis of a true democracy. A member's ideas may not be accepted by the governing bodies, but they are certainly given a fair hearing and full consideration.

Clinical-Pathological Conference

FRENCH HOSPITAL, SAN FRANCISCO, NOVEMBER 6, 1947

Presentation of Case: The patient was a 68-year-old white unmarried nurse who was admitted to French Hospital, San Francisco, on May 23, 1946, because of fever, nausea, pain, and malaise. She had seen a physician in August, 1945, because of fever and muscular aches of three months' duration. This attack began with pain in the feet and leg muscles which became so severe she could scarcely walk. There was intermittent swelling in the right hand and the left shoulder. The temperature rose to 101.4° F. The patient was placed on bed rest, high caloric diet with supplementary vitamins B and C, salicylates, and physiotherapy. Improvement was gradual but the salicylates appeared to cause considerable nausea, epigastric pain and tenderness. A modified Sippy regime was started, and with some reduction in the dose of salicylates the gastric symptoms were relieved. Since this attack in 1945 the patient had had occasional chills and spiking fever of 103.0. She had at times complained of fever, headaches, diplopia and instability of equilibrium. There had been a gradual loss of weight and appetite with considerable weakness.

The past history revealed that the patient had always been frail. She had pneumonia five times before the age of eight and she developed a marked scoliosis. This had been corrected to some degree with physiotherapy, but following the age of 15 years she had had a rather constant dull ache in the lower back with radiation down the back of the right leg. This pain was aggravated by stooping, jarring, and coughing. In 1936 while doing some heavy lifting the patient felt a snap in her back which was disabling enough to require six weeks of bed rest. A similar attack occurred in 1938. When she was 31 years old she suffered for a few weeks from episodes of nocturnal pain in the arms and hands which were diagnosed as neuritis. At age 38 there was a sudden onset of severe, sharp pain in the right knee with fever which lasted about six weeks. At the age of 43 a "butterfly" lesion appeared on the face and gold injections were given. At the age of 49 there was a sudden attack of soreness in the epigastrium and chest with dyspnea. There had been many such attacks since then which were relieved by amidopyrin, phenobarbital, or acetylsalicylic acid. At the age of 54 some symptoms of difficulty in swallowing developed, with regurgitation of foods and fluids. These symptoms would recur every few weeks and would last only a relatively short time.

The family history was non-contributory except that the patient's father died of tuberculosis at the age of 50, and her mother always had been very frail and had suffered from "arthritis."

Physical examination on admission showed a temperature of 101.0, pulse 96, respirations 20. Blood pressure 100/60. The patient was frail but fairly well developed and well nourished. The skin was hot and moist, slightly shiny over the lower legs and reddened over the right thigh. The pupils reacted to light and accommodation. There was a paresis of the left abducens and the fundi showed minimal arteriosclerosis. A slight deviation of the tongue to the left was noted. There were a few crepitant rales in the lungs at both bases. The heart was normal. A pulse was easily palpable in all peripheral arteries and was equal bilaterally. The abdomen was slightly distended. No tenderness or masses were palpated. Pelvic and rectal examinations were negative. Extremities were not remarkable, except for pain on motion of both ankle joints and the right wrist. Reflexes were active and equal. There was a positive Babinski on the right. Hyperesthesia of both calves was noted, with moderate loss of sensation in the feet.

Examination of the urine showed 1 plus albumin, with 75 to 100 leukocytes, and it was loaded with bacteria. Erythrocytes numbered 3.4 million, and leukocytes 6,500 with 81 per cent segmented polymorphonuclear forms, 17 per cent lymphocytes and 2 per cent monocytes. Hemoglobin measured 9.0 gm. per cent. There was marked hypochromia, anisocytosis, and poikilocytosis of the erythrocytes. The sedimentation rate was 32 mm. in one hour. The spinal fluid showed a positive Pandy, and a cell count of 82 erythrocytes with no leukocytes. Results of the Kahn test, gold curve reading, blood culture, tuberculin test and abortus agglutinations were all negative. A gastrointestinal series showed an esophageal diverticulum in the mid-thorax, a small hiatus hernia, and a diverticulum of the duodenum with possible duodenal ulcer.

On the second hospital day the patient developed a severe headache. This was partially relieved by medication but continued through the third and fourth day when a difficulty in forming words developed. At this time there was considerable nausea and vomiting, along with involuntary urination. On the fifth day there was some incoordination of the hands. By the seventh day the patient was unable to use her arms and legs and had difficulty in swallowing. She became comatose and died on the eighth hospital day, May 30, 1946.

DISCUSSION BY CLINICIAN

DR. ALBERT C. DANIELS: This remarkable case presents a complicated picture to me as a surgeon. The patient had a long history of chronic illness, with episodes of acute exacerbation and then remissions, over a period of at least 37 years. These acute episodes were characterized by joint and muscular pain associated with fever, and occasionally with

findings of abnormality in the nervous system, particularly in the last episode. The duration of the illness rules out the probability of any of the usual infectious diseases, such as tuberculosis or Brucella infections, as well as of any neoplastic process.

Of significance is the history of gold injections for a "butterfly" lesion of the face 25 years ago. By far the commonest of the diseases in which this lesion appears is lupus erythematosus, and gold has been used for treating this condition.

Of interest, too, are the attacks of soreness in the epigastrium and chest, with shortness of breath. Disseminated lupus frequently attacks serous membranes such as the pleura, pericardium, and peritoneum, and it might account for these symptoms. All the pains in the patient's extremities, and the intermittent swellings of the various joints speak for some type of rheumatic lesion or rheumatic state to which the entity of disseminated lupus probably belongs. The condition known as periarteritis nodosa or polyarteritis nodosa also is probably some type of rheumatic state, and this condition can affect any and all portions of the body. I, personally, know too little about polyarteritis nodosa to say whether nervous system abnormalities are common concomitants, but from a theoretical standpoint there seems no reason why the arteries of the brain could not be affected the same as those elsewhere, and thus account for the findings indicative of disease of the nervous system. Other manifestations of the rheumatic state, such as rheumatoid arthritis or rheumatic fever, could hardly produce this picture of so many years' duration with no evidence of cardiac or joint changes.

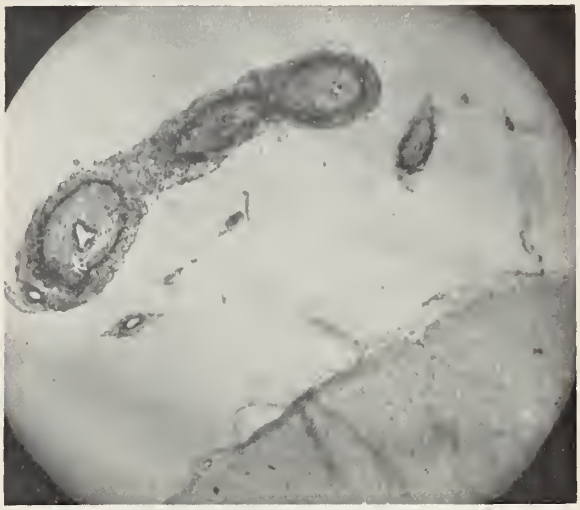
In addition to the rheumatic state, the patient also suffered from secondary anemia and a small hiatus hernia, with diverticula of the esophagus and duodenum. These latter, I feel, are not significant, although the anemia may well be the result of protracted rheumatic disease.

My diagnosis, then, is that this patient suffered from a chronic rheumatic state, possibly polyarteritis nodosa; but because of the history of the "butterfly" lesion, I will guess that she had a disseminated lupus, though I realize that the distinction between these two conditions is not always clear.

DISCUSSION BY PATHOLOGIST

Dr. George A. Watson: The body at autopsy four and a half hours after death was well developed and in a good state of nutrition. There were no eruptions, no pigmentation of the skin, no lymphadenopathy. The pleurae and pericardium were obliterated by adhesions which separated without great difficulty. Peritoneal surfaces were clean except for slight splenic capsular thickening.

The heart weighed 300 grams, and the chambers were neither dilated nor their walls hypertrophied. The coronary tree was patent with a maximum of 15 per cent linear diminution in the lumen. In the valve leaflets there were no vegetations and no stigmata of previous inflammation was present. Lungs



Meninges, 2.4 Times Actual Size

and liver were normal in weight and appearance. The spleen was soft, light grayish-red, and weighed 62 grams.

In the gastrointestinal tract there were a diaphragmatic hernia measuring 6 x 6 cm. and a periampyllary diverticulum approximately 2 x 6 cm.

One kidney weighed 140 and the other 175 grams. The cortical surfaces were finely granular, and the only features of consequence disclosed by section were several pale, infiltrated areas 1 to 2 cm. in diameter in each kidney, and a solitary, non-proliferative cyst in the left kidney (the heavier of the two) measuring 6 cm. in diameter.

The brain weighed 1,400 grams. Slight flattening of the cerebral convolutions was evident but the meninges appeared normal. In the rostral portion of the left internal capsule there was a questionable area of softening 1.0 cm. in diameter and a definite area in the central part of the pons.

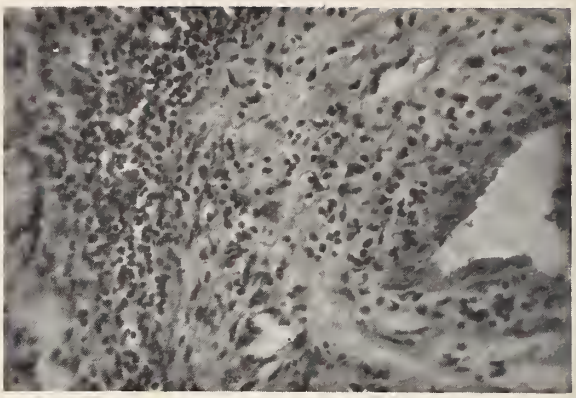
Microscopically significant changes were found in the coronary arteries, ileum, pancreas, kidneys, meninges, and pons. The major coronary trunks showed, in addition to intimal atheromatosis, considerable patchy, round cell infiltration of media and adventitia, with irregular scarring of the former. The picture was not characteristic of the usual senile process. Smaller arterial branches were infiltrated and edematous in all coats: the inflammatory elements consisted of neutrophils, lymphocytes, histiocytes and a few plasma cells. The several layers of the wall were generally not clearly distinguishable except at a relatively few points at which the media was marked by focal or circumferential acidophilic hyalin necrosis. Essentially similar changes were found in the ileum and pancreas. The vessels so involved were numerous and their diameters ranged from 150 micra to 500 micra.

In the kidneys there were several small purulent necrotic areas not associated with thromboses. A few arteries showed either adventitial infiltration of mild degree or symmetrical scarring. There were no significant findings in the glomerulae and tubules.



Meninges 10 Times Actual Size

Sections taken at approximately the rostral border of the inferior olivary nucleus revealed an area of fairly recent ischemic degeneration involving the left cortico-cranial tracts and the inferior half of the tegmental portion of the pons. Although the degeneration was most marked in the region described, it extended across the midline, actually covering an



Meninges 22 Times Actual Size

area 5 x 10 mm. in cross-section. A suspicion of infarct in the left internal capsule could not be confirmed histologically.

In the meningeal arteries there were widespread changes which consisted of fibrinoid degeneration of the media with edema and fibroblastic proliferation of the intima, occasional thrombosis and panarterial inflammatory infiltration, most marked in and adjacent to the muscular layer. There were varying degrees of fibrosis, but here as in the remainder of the organs, advanced cicatrization was not present.

The anatomic diagnoses were: polyarteritis nodosa involving coronary arteries, pancreas, ileum, kidneys and meninges; infarction of the pons; chronic obliterative pericarditis; chronic obliterative pleuritis; hiatus hernia; diverticulum of the duodenum; small kidney abscesses; solitary cyst of the left kidney.

There are certain features of this case which suggested disseminated lupus erythematous at necropsy as well as clinically, particularly the involvement of serous membranes and the absence of grossly visible segmental arterial nodulations. The histological features, however, are quite specific and leave no room for doubt.

It should be emphasized that most of the arterial lesions were acute or subacute, only a few vessels in the healed or cicatricial stage could be found, and even in these there may have been an involutional element. In view of the absence of chronic lesions it seems unlikely that the more remote events in the history are correlated with the principal disease. The duration of the latter was probably not more than one year.

CALIFORNIA MEDICAL ASSOCIATION

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NOTICES AND REPORTS

New President-Elect

A man who, even as a newcomer to California 29 years ago, had qualities of leadership that were recognized soon afterward in his election to the House of Delegates of the California Medical Association, last month became President-Elect of the Association. He is Dr. R. Stanley Kneeshaw of San Jose, who has attended every annual session of the C.M.A., except one, since he began practicing in California in 1920 and who has served continuously as a representative of Santa Clara County, either in the House of Delegates or on the C.M.A. Council, since 1921.

Of French Canadian stock, Dr. Kneeshaw was born 57 years ago in Pembina, North Dakota, to parents who had settled there several years before the territory became a state. His father was a lawyer who, at the time of his retirement in his 90th year of life, had served longer as a superior court judge than had any other magistrate in the United States. The new President-Elect's call, however, was to medicine rather than to law—perhaps a genetic reflection that his great great aunt on the distaff side of the escutcheon was Florence Nightingale.

After receiving a Bachelor of Arts degree from the University of North Dakota in 1909, Dr. Kneeshaw became a Doctor of Medicine upon graduation from Rush Medical College in Chicago six years later. Following internship at Cincinnati General Hospital, he became associated with the medical staff of the Milwaukee Railroad as resident surgeon in the Washington Boulevard Hospital, Chicago, and later was placed in charge of the railroad's division hospital in St. Moritz, Idaho.

Entering military service in the first World War, he served in charge of a field hospital of the 92nd Division in France. Discharged in 1919 with the rank of major, Dr. Kneeshaw came to California, was licensed as a physician in this state in 1920, and began practicing in San Jose. The confidence in him that has inspired his colleagues to return him year after year to elective office in organized medicine is reflected also in a large general practice, the field in which he has chosen to remain.



R. STANLEY KNEESHAW

Dr. Kneeshaw is a past president of the Santa Clara County Medical Society, and also has served as president of the staff at both the San Jose Hospital and O'Connor Hospital. During the recent war he was a member of the California State Procurement and Assignment Service. He is a member of Sigma Chi and Nu Sigma Nu fraternities, the Kiwanis Club and the United States Chamber of Commerce. He has three daughters and four grandchildren.

For recreation the new President-Elect flies his own plane, hunts, fishes, gives barbecue parties, does a little gardening, plays golf.

In Memoriam

Athon, Lewis Harlan. Died in Los Angeles, February 26, 1948, age 60. Graduate of the University of Illinois College of Medicine, Chicago, 1910. Licensed in California in 1911. Doctor Athon was a retired member of the Los Angeles County Medical Association, and the California Medical Association.

✣

Burke, Edward Wilbur. Died in Redlands, March 4, 1948, age 72, after several months of illness. Graduate of the University of Illinois College of Medicine, Chicago, 1901. Licensed in California in 1905. Dr. Burke was a retired member of the San Bernardino County Medical Society, the California Medical Association, and an Affiliate Fellow of the American Medical Association.

✣

Cody, Bernard Anthony. Died in San Francisco, March 24, 1948, age 51. Graduate of Stanford University School of Medicine, Stanford University-San Francisco, 1925. Licensed in California in 1925. Doctor Cody was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

✣

Edgar, James Day. Died in Whittier, January 20, 1948, age 58, of acute adrenal insufficiency following influenza. Graduate of the University of Minnesota Medical School, Minneapolis, 1915. Licensed in California in 1940. Doctor Edgar was a retired member of the Los Angeles County Medical Association, the California Medical Association, and an Affiliate Fellow of the American Medical Association.

✣

George, James DeWitt. Died in Los Angeles, November 16, 1947, age 49. Graduate of the Indiana University School of Medicine, Bloomington-Indianapolis, 1926. Licensed in California in 1929. Dr. George was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

✣

Sheehy, Frank. Died in San Francisco, March 13, 1948, age 54, in an automobile collision. Graduate of the College of Physicians and Surgeons of San Francisco, 1920. Licensed in California in 1920. Doctor Sheehy was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

✣

Taylor, Ross Oren. Died in San Diego, February 25, 1948, age 59, after a long illness. Graduate of the University of Illinois College of Medicine, Chicago, 1912. Licensed in California in 1927. Doctor Taylor was a retired member of the San Diego County Medical Society, and the California Medical Association.

✣

Walters, Cassius M. Clay. Died in Los Angeles, February 19, 1948, aged 78. Graduate of Rush Medical College, Illinois, 1892. Licensed in California in 1914. Doctor Walters was a retired member of the Los Angeles County Medical Association, the California Medical Association, and an Affiliate Fellow of the American Medical Association.

✣

Welty, Cullen Francis. Died in San Francisco, March 8, 1948, age 82, after a long illness. Graduate of the University of Pennsylvania School of Medicine, Philadelphia, 1890. Licensed in California in 1904. Doctor Welty was a retired member of the San Francisco County Medical Society, and the California Medical Association.

Yates, Elizabeth Mildred. Died in Santa Rosa recently, age 94, of arteriosclerosis. Graduate of Cooper Medical College, San Francisco, 1887. Licensed in California in 1888. Doctor Yates was a retired member of the Sonoma County Medical Society, and the California Medical Association.

Traveling Postgraduate Seminars

The first seminar of a proposed series of such programs being arranged by the California Medical Association's Committee on Postgraduate Activities was held at San Luis Obispo, March 20 and 21, and the second is scheduled for El Centro, May 20 and 21.

Thirty-three physicians, including six from Santa Barbara County, attended the San Luis Obispo meeting. Twenty-eight attended the afternoon session, there were twenty-one at the evening meeting and fourteen at the morning hospital clinical discussion. Seventeen members attended both afternoon and evening sessions and nine attended all three meetings.

The program presented was as follows:

Saturday

The Important Factors in Prenatal Care.—W. Dayton Clark, M.D., Assistant Professor, Obstetrics and Gynecology, Stanford University.

The Use and Abuse of Hormones in Obstetrics and Gynecology.—Charles E. McLennan, M.D., Professor, Obstetrics and Gynecology, Stanford University.

Psychosomatic Problems in Obstetrics and Gynecology.—Leon J. Whitsell, M.D., Assistant Clinical Professor Medicine, Neuropsychiatry, Stanford University.

Cesarian Section—Indications and Techniques.—Dr. Clark.

When is Hysterectomy Justified?—Dr. McLennan.

Discussion Period.

Saturday Evening

Psychosomatic Medicine—Applications to General Practice.—Dr. Whitsell.

Sunday Morning

Clinical Discussion at the San Luis Obispo County Hospital.—Chairman, Robert O. Pearman, M.D., President, San Luis Obispo County Medical Society.

Dr. Edward Blair, member of the Postgraduate Committee, made the following report on the meeting: "All the men who attended were enthusiastic over the idea and the way it was handled. Some said it was worth putting up a substantial registration fee for. All agreed that the absent members, in addition to missing something, were culpable in failing to support and encourage the effort by attending."

The subjects to be presented at the seminar in El Centro are Pediatrics, Obstetrics and Gynecology. Speakers will be members of medical school faculties. In addition, a representative of the C. M. A. Cancer Commission will discuss the role of the physician in private practice in the Cancer Program.

As to charging a registration fee, the Committee has considered the matter carefully and decided against making a charge at present. The main argument against the fee levy is that it might be a deterrent to increased attendance. Later, as the program gathers momentum and the hoped for general popularity, the expenses incidental to the continuation will probably require a registration fee.

NEWS and NOTES

NATIONAL • STATE • COUNTY

ALAMEDA

Oakland will have an advisory board for the City Department of Health under a plan recently approved by the city council. The board will be made up of two physicians, one dentist and two lay members, all of whom will be appointed by the city manager.

* * *

Dr. David Frost recently was appointed full-time health officer of the City of Alameda, succeeding Dr. James F. Brady who served in the position on a part-time basis.

LAKE COUNTY

Lake county doctors and a committee of citizens of Round Valley, an area now without a physician, are working out a plan for transporting physicians by plane to Covelo, center of the Round Valley area, from Lakeside Hospital in Lake County. Regular service five days a week, with arrangements for emergency calls, is proposed. The doctors would take turns making the trip, so that the community might have the services of specialists in several fields. A small clinic with facilities for simple operations is planned for Covelo, with an airplane ambulance to fly patients requiring more extensive treatment to the hospital in Lake County.

LOS ANGELES

Dr. Edwin H. Hall has been appointed health officer of the city of Vernon to succeed Dr. George D. Wells.

SAN FRANCISCO

Dr. Mayo H. Soley, assistant dean of the University of California Medical School since 1944, will take over his duties as dean of the University of Iowa Medical College on July 1. Announcement of the appointment of Dr. Soley to that position was made recently by Virgil M. Hancher, president of the University of Iowa.

* * *

Dr. Robert C. Martin of San Francisco was elected president of the American Laryngological, Rhenological, and Otological Society at the 52nd annual convention of that organization in Atlantic City last month.

* * *

An eye bank has been established at the University of California Medical School. The bank, which will act as a reservoir for corneal transplants, was established in cooperation with other eye banks. There are two similar banks now operating in California, one at Stanford University and another in Los Angeles. In addition to supplying eyes, the new bank will do research on corneal grafting and transplanting and on blindness resulting from corneal damage. It was established through the subdivision of ophthalmology and the Francis I. Proctor Foundation for Research in Ophthalmology. Eyes will be supplied to clinic services of hospitals and qualified ophthalmic surgeons.

* * *

Dr. Erwin C. Sage, formerly director of public health at Des Moines, Iowa, has been appointed assistant public health director for the City and County of San Francisco, a post that has been vacant since Dr. Emmet Sappington resigned almost a year ago.

SAN MATEO

Dr. Harold D. Chope, formerly assistant health officer of the San Joaquin Public Health District, has been appointed health director of San Mateo County to take the place of Dr. Charles C. Gans who retired last January 1.

* * *

Dr. Harry C. Warren of San Mateo was elected president of the California Tuberculosis and Health Association at the meeting of that organization in Long Beach last month. Dr. Thomas Wiper, of San Francisco, was elected president of the California Trudeau Society, and Dr. Paul C. Sampson of Oakland was named a director of the association.

SANTA CLARA

A county-wide venereal disease case finding program has been undertaken in Santa Clara County under the sponsorship of the county medical society and the health departments of the county and the City of San Jose.

* * *

Dr. Joseph E. Giansiracuso of San Jose has been appointed to a two year fellowship awarded by the Commonwealth Fund for research in diseases of the joints, heart and blood vessels at the Massachusetts General Hospital in Boston. For the past two years, Dr. Giansiracuso has served in the Army Medical Corps.

SANTA BARBARA

Announcement of the appointment of Dr. Marvin C. Smith to the paid medical staff of the Santa Barbara County General Hospital was made last month by Dr. Charles C. Hedges, administrator.

TUOLUMNE

H. H. Gillis, D.O., has been appointed acting health officer of Tuolumne County, succeeding Dr. Guy Wallace.

GENERAL

The Cancer commission of the California Medical Association has made available the following list of 56 Consultative Tumor Boards in 17 counties of the state. All are meeting minimum standards prescribed by the California Medical Association.

Alameda County: Herrick Memorial Hospital, Berkeley; U. S. Naval Hospital, Oakland; Alameda County Hospital, Oakland; Samuel Merritt Hospital, Oakland; Providence Hospital, Oakland; Permanente Foundation Hospital, Oakland; Ernest B. Cowell Memorial Hospital, Berkeley; Children's Hospital of the East Bay, Oakland; Alta Bates Hospital, Berkeley; Peralta Hospital, Oakland.

Fresno County: Fresno Community Hospital, Fresno.

Kern County: Bakersfield Hospital, Bakersfield.

Los Angeles County: St. Joseph's Hospital, Burbank; Physicians and Surgeons Hospital, Glendale; Hollywood Presbyterian Hospital, Hollywood; California Hospital, Los Angeles; Cedars of Lebanon Hospital, Los Angeles; White Memorial Hospital, Los Angeles; U. S. Naval Hospital, Long Beach; Long Beach Community Hospital, Long Beach; Paradise Valley Hospital, National City; Huntington Memorial Hospital, Pasadena; U. S. Veterans Administration

Hospital, Sawtelle; Los Angeles General Hospital, Los Angeles; Seaside Memorial Hospital, Long Beach; Pomona Valley Community Hospital, Pomona; Culver City Hospital, Culver City; Mt. Sinai Hospital, Los Angeles.

Monterey County: Monterey County Hospital, Salinas.

Orange County: Orange County General Hospital, Salinas. St. Joseph's Hospital, Santa Ana.

Riverside County: Riverside County Hospital, Riverside.

Sacramento County: Sacramento County Hospital, Sacramento; Sutter Hospital, Sacramento; Mercy Hospital, Sacramento.

San Bernardino County: San Bernardino County Hospital, San Bernardino.

San Diego County: Mercy Hospital, San Diego; San Diego County General Hospital, San Diego; U. S. Naval Hospital, San Diego.

San Francisco County: Stanford University School of Medicine; University of California Hospital; U. S. Veterans Administration Hospital; Mt. Zion Hospital; Mary's Help Hospital; French Hospital; St. Joseph's Hospital; St. Mary's Hospital; Stanford Service and U. C. Service, San Francisco City and County Hospital.

San Mateo County: Mills Memorial Hospital, San Mateo.

Santa Barbara County: Santa Barbara Cottage Hospital, Santa Barbara; Santa Barbara General Hospital, Santa Barbara.

Santa Clara County: Santa Clara County Hospital, San Jose.

Sonoma County: Sonoma County Hospital, Santa Rosa.

Stanislaus County: Stanislaus County Tumor Board, 1024 J Street, Modesto.

Yolo County: Woodland Clinic Hospital, Woodland.

* * *

The American Congress of Physical Medicine will hold its 26th annual scientific and clinical session September 7-11 inclusive, at the Hotel Statler, Washington, D. C. Scientific and clinical sessions will be open to members of the medical profession in good standing with the American Medical Association. Full information may be obtained by writing to the American Congress of Physical Medicine, 30 North Michigan Avenue, Chicago, Illinois.

* * *

A revised and greatly expanded professional training program for regular Army and Reserve Medical Officers has been announced by Major General Raymond W. Bliss, Surgeon General of the Army. The program calls for 1900 new doctors in the regular army and an increasing number of volunteer reserve officers on active duty. The program is designed to give many more army doctors the training needed to meet the requirements for certification by the American Specialty Boards, and to further integrate civilian and military medicine. The new program will facilitate the classification and career management system already in practice in the Medical Corps whereby every effort is made to assign professional officers to posts where they can practice in their special fields of interest.

Physicians already resident in civilian hospitals are now eligible for commissions in the regular army. Those commissioned may continue their residences with full pay and allowances from the army and will be assigned by the army to the civilian hospital in which they are already resident. Even in the event of a major emergency, residents will complete their training, if it is at all possible.

Civilian interns are now eligible for Army Medical Corps Reserve commissions, and may continue their internship with full army pay and allowances. Those so commissioned will undertake to accept a commission in the regular army on completion of their internship, and will then be permitted to compete for army residencies in either army or civilian hospitals.

One hundred and fifty commissions in the grades of major, lieutenant-colonel and colonel will be offered in 1948, and another 150 in 1949, to doctors who have completed their training. This aspect of the program is not limited to those men already certified as specialists, since outstanding officers for command and staff positions are needed as well as professional men.

* * *

Dr. Helen B. Taussig, associate professor of pediatrics, and Dr. Alfred Blalock, professor of surgery at the Johns Hopkins Medical School, have been selected for the 1948 award of the Passano Foundation which was established in 1944 by the Williams & Wilkins Company to aid in the advancement of medical research. Presentation of the $5,000 award, which is given in recognition of the recipients' development of an operation to correct the tetralogy of Fallot, will be made in Chicago, June 23, during the week of the American Medical Association Convention.

* * *

The 25th annual meeting of the members and fellows of the American College of Radiology will be held in the Sheraton Hotel, Chicago, June 20, for the election of officers and transaction of business.

* * *

The American Board of Obstetrics and Gynecology announces that general oral and pathology examinations (Part II) for all candidates will be conducted at Washington, D. C., by the entire board from Sunday, May 16, through Saturday, May 22, 1948.

* * *

The University of Southern California School of Medicine recently was awarded a $25,000 grant from U. S. Public Health Service Funds to aid in cancer teaching programs, and the University of California at Berkeley received $16,200 to support isotopic tracer studies of tissue synthesis and the reactions of metabolic antagonists.

* * *

The Board of Examiners of the American College of Chest Physicians announces that the next oral and written examinations for Fellowship will be held at Chicago, June 17, 1948. Candidates for fellowship in the College, who would like to take the examinations, should address the Executive Secretary, American College of Chest Physicians, 500 North Dearborn Street, Chicago 10, Illinois.

* * *

The Board of Regents of the American College of Surgeons, at a meeting on February 22, adopted a resolution commending the services of nurses who have had special training in the administration of anesthesia and recommending the continuance of training courses in this field for nurses. The resolution reads as follows:

"The American College of Surgeons regards with deep concern the actions of some physician anesthesiologists in giving the impression to the laity in the public press that it is unsafe for experienced nurse anesthetists to conduct surgical anesthesia. While it supports the increasing tendency of having physician anesthesiologists in charge of surgical anesthesia, it deplores at this time any propaganda for the elimination of the trained nurse anesthetist. On the contrary, the American College of Surgeons is of the opinion that, in view of the inadequacy in number of the physician anesthesiologists and in view of the splendid record of achievement of the nurse anesthetist, institutions engaged in the training of nurses for this purpose should be encouraged to continue their programs."

Letters to the Editor . . .

RECOVERY FROM A SUBCUTANEOUS OVERDOSE OF MORPHINE BY PROMPT INCISION AND DRAINAGE

Some time ago in this journal Dr. P. J. Hanzlik described a case in which "Recovery from a Surely Fatal Dose of Epinephrine" had been accomplished by the persistent use of various nitrites as peripheral vasodilators. These known mutual antagonists of epinephrine resulted in recovery in about four hours of a child who had received more than twice the known fatal dose, because accidentally 20 mgm. of epinephrine (0.2 cc. of a 10 per cent spray-solution), was injected subcutaneously.

Surely no thinking physician ever injects a drug of any kind without the disquieting thought, "What if the patient will not tolerate this?" If the intravenous route be used there is no alternative but to rely on pharmacological antagonists, and the physician should be sure that appropriate ones are at hand.

If the injection was subcutaneous, however, as in the case described by Professor Hanzlik, can the drug be retrieved by prompt incision and drainage? There is a general agreement that when the fangs of a rattlesnake inject venom subcutaneously that the wound should be "scarified." Is the likelihood of recovering toxin or drug injected subcutaneously sufficiently great to warrant the attempt to sponge it out after incision and drainage? The following case indicates the answer is "Yes."

Despite the numerous obvious advantages of the metric system, the fact remains that an accidental shift of the decimal point will mean that the patient gets ten times too little, or worse, ten times too much. Precisely this sort of accident occurred in Vienna to a 28-year-old male with renal colic who had been assigned to me as a physician for study. The student nurse injected 16 centigrams (0.160 gram) of morphine sulfate instead of 16 milligrams (0.016 gram) as ordered. (To prevent this sort of mistake the last two editions of the U. S. Pharmacopeia have recommended the practice of expressing any dose under 0.1 (1/10) gram as so many milligrams. Thus the usual ¼ grain dose of morphine sulfate is written as 16 mg., and not 0.016 gm.)

After making the subcutaneous injection of 160 mg., the young nurse decided it strange that she should have had to use ten tablets instead of one, and informed the resident physician. He promptly made a small incision at the point of injection and sponged out the injected solution. The result was so successful that the patient did not even feel drowsy from the effect of the morphine.

It is interesting to speculate whether in the case described by Hanzlik the overdose of epinephrine (a drug slowly absorbed because of its inherent vasoconstrictive powers) might not have been similarly retrieved.

Wilbur Bailey, M.D.
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Los Angeles 5, California

STANDARDS FOR SAFE USE OF CURARE

At the American Medical Association convention in San Francisco in July, 1947, a paper on "The Physiologic Effects of Curare and Its Use as an Adjunct to Anesthesia" was presented which has since been published in one of the surgical journals.* In this report the advantages of the use of curare for muscular relaxation during surgery were brought out. However, particular emphasis was placed upon the fact that while curare is a safe drug when in the hands of physicians acquainted with its action, it is an extremely dangerous drug when administered by those ill-trained in its use.

The authors of this paper feared that with curare, as has been the case with other new drugs, deaths following its use would be blamed on the drug itself rather than on the improper use of the drug. Therefore, the paper was published in a surgical journal rather than in an anesthesiological journal for the specific purpose of impressing surgeons with the danger to their patients from the administration of curare by unqualified persons. Certain standards were set by which surgeons could judge the qualifications of anesthetists for administering curare. Briefly, these were:

1. The anesthetist must have a thorough knowledge of respiratory physiology, both normal and abnormal. He must be able to recognize respiratory depression when he sees it and know how to combat its ill effects, and especially he must learn the criteria by which an anesthetist determines when the patient can safely be allowed to breathe without help.

2. The anesthetist must be able to give good inhalation anesthesia. He must know both the scope and the limitations of the available anesthetic agents and also of the sedative, hypnotic, and basal narcotic drugs he may use in conjunction with curare.

3. The anesthetist must learn and thoroughly understand the action of curare without anesthesia. The ideal way to do this is to administer the drug to unanesthetized dogs.

While no specific statement to the effect was made, the inference was clear that in the authors' opinion if curare was used in anesthesia by persons who did not have the above qualifications, the patients would

*The Physiologic Effects of Curare and Its Use as an Adjunct to Anesthesia, P. Harroun, M.D., F. E. Beckert, M.D., and C. W. Fisher, M.D., Surg., Gynec. & Obst., 84:491-498 (April), 1947.

suffer. This prophecy has been amply and grimly fulfilled. In the period since the paper was presented, seven deaths from curare in this area have been reported to the authors, the last two occurring on the same day only recently. There have doubtless been many more; such occurrences are not of the type publicized by any hospital.

The first five deaths occurred during the first year after the paper was presented. The anesthetists were all physicians. The inhalation agents used in conjunction with curare were nitrous oxide and cyclopropane. After these five deaths there was a break of six months during which no deaths were reported. Apparently physician anesthetists were learning (the hard way) that there is more to caring for a patient who has received curare than throwing him into bed and leaving him to Mother Nature. The two most recent deaths both followed the use of curare by nurse anesthetists. In both instances the patients received pentothal; in one case nitrous oxide was also used. It is feared that surgeons who have become acquainted with the relaxation produced by curare from its use on their patients by physician anesthetists, are beginning to request, or at least condone, its use by technicians.

A typical case history of a death from curare is as follows:

A man of 40 is sent to surgery for an elective cholecystectomy. He is put to sleep with pentothal, and cyclopropane and oxygen are administered. When the peritoneum is opened the patient is insufficiently relaxed. Either with or without the surgeon's knowledge, curare is administered, and immediately the relaxation becomes adequate. When the gallbladder has been removed, more curare is given to facilitate closure of the peritoneum. At the end of the operation the patient is in good condition, well oxygenated, breathing spontaneously, with a good pulse and blood pressure. He is returned to bed. Half an hour later he is found dead. Postmortem examination shows atelectasis of both lungs.

We hope this communication will impress upon physicians in this area the fact that such deaths are entirely preventable and must be blamed not upon curare, but upon the ignorance of those administering it. In the two institutions in this immediate vicinity where curare has been used most extensively in the last two years there have been nearly one thousand administrations of curare to anesthetized patients without a single death which could be attributed to curare. As was stated in the original paper, the safe use of curare depends entirely upon the knowledge of the anesthetist administering it. A surgeon who allows its use upon his patients by unqualified persons has only himself to blame for resulting deaths.

F. E. Beckert, M.D., C. W. Fisher, M.D.,
P. Harroun. M.D.. *San Francisco*

INFORMATION

Medical Supplies Needed in Devastated Areas

Continued aid in the form of medical and surgical supplies from America is needed to prevent widespread suffering and death among the peoples of war-devastated areas throughout the world. The undersigned earnestly request all members of our profession to help us provide such aid through the Medical and Surgical Relief Committee, Inc.

During the past seven years, with little publicity and modest financial support, this Committee has provided more than a million dollars worth of desperately needed medical, surgical and dental supplies and publications to stricken areas overseas. These materials are sent to hospitals, physicians and dispensaries giving *free* medical care to the needy.

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Germicides
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Hot water bottles and syringes
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Penicillin (Crystal, Ointment, Tablets)
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Board of Medical Examiners

Because reports of appointments in the last few months to the California Board of Medical Examiners may have escaped the attention of some physicians in the state, the roster of the Board as it stood March 17, 1948, after the most recent change, is printed below:

Richard O. Bullis, president, Los Angeles
Fred Scatena, secretary, Sacramento
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Wilbur Bailey, Los Angeles
Clayton D. Mote, San Francisco
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Howard Fleming, Laguna Beach

Reporting of Deafness in Children Required

So that parents or guardians of children who are deaf or hard of hearing may be properly informed of special educational facilities for those thus handicapped, California Medicine has been asked to call attention to sections of the California Education Code relating to reports required of physicians who discover deafness in children.

"17254. Every attending or consulting physician who examines any child under 20 years of age found to be totally deaf or with impaired hearing shall report at once to the principal of the California School for the Deaf the name, age, residence, and the name of the parent or guardian of the minor.

"17255. The principal of the California School for the Deaf shall immediately notify the superintendent of schools of the county, city, or city and county of which the child is a resident of the name, age, residence of the child, and the name and residence of the parent or guardian of the child."

BOOK REVIEWS

HANDBOOK OF COMMUNICABLE DISEASES. By Franklin H. Top, A.B., M.D., M.P.H., F.A.C.P. Medical Director, Herman Kiefer Hospital. Clinical Professor of Preventive Medicine and Public Health, Wayne University College of Medicine; Extramural Lecturer in Infectious Diseases and Epidemiology, School of Public Health, University of Michigan; Consultant, Preventive Medicine Section, Surgeon General's Office, United States Army. And Collaborators. C. V. Mosby Co., St. Louis. Price $9.50.

The second edition of this textbook has been augmented considerably in both size and contents. Fourteen new chapters have been added, principally by contributing authors. These additions give Top the most complete coverage of the various infectious diseases of any standard texthook in the field and have notably enriched the book.

Although termed a handbook and intended for "all persons whose professional duties necessitate contact with certain communicable diseases or infestations," the volume suffers greatly from attempting to meet the needs of nursing students, medical students, and practicing physicians. The result is not entirely satisfactory as a text for any of these groups. The chapters by the principal author in particular often are much oversimplified for use by medical readers. In spite of this, much of the text is not sufficiently interpretive to be classed as a handbook.

The illustrations are excellent and surpass almost all others which have appeared in recent textbooks. For those principally interested in the teaching of infectious diseases to medical students, the appendices of final diagnoses of patients referred to Herman Kiefer Hospital as compared to initial referring diagnoses is of great value. Statistical proof of the frequency of diagnostic errors is of great aid in the discussion of differential diagnosis.

All things considered, this textbook is satisfactory in spite of its shortcomings and represents a great improvement over the first edition.

* * *

AN INTRODUCTION TO GASTRO-ENTEROLOGY. By James Dunlop Lickley, M.D. Hon. Consulting Physician, Sick Children's Hospital, Newcastle-upon-Tyne: with 21 illustrations. The Williams and Wilkins Co.

This little book can be read through in three or four hours. As the author states in his preface, it is written for beginners, and there is very little in it of service to the practicing physician. The text combines the basic knowledge of the anatomy of the alimentary tract and the physiology of the processes of the digestion and absorption of food. The last section dealing with practical clinical application of the fundamentals is well presented for the medical student, particularly as regards interpreting the symptoms of pain and the manifestations of hypermotility. The text is well organized and well written, and the illustrations are clear. For those interested in the structure and functions of the human alimentary tube, this brief survey offers a satisfactory compend of the subject.

* * *

DEEP ANALYSIS. By Charles Berg, M.D. W. W. Norton & Company, Inc., New York, 1947.

The author of this book is an English psychiatrist who has had excellent experience in working with the fundamental mental disorders. The purpose of the hook is to give the reader a presentation of a case of what might ordinarily be called a character neurosis and to give in detail the manner in which the patient was treated and to follow his progress throughout the treatment. The writer is a follower of the psychoanalytic school and the presentation follows largely the orthodox psychoanalytic technique. The material as presented is clearly and simply written and is designed to give to the uninitiated the manner in which psychotherapy is carried out with elaborate recordings of interviews and conclusions drawn from time to time as the analysis develops.

The technique adopted by the author follows to a large extent the orthodox technique of free association and dream analysis. The problem of father and mother fixation, of the homosexual component, the manner of dealing with the transference situation, and the interpretations given to all of the material is presented systematically and in a manner which can be recommended to all of those who wish to get a clear idea of the theory and technique of psychoanalysis and present methods of psychotherapy. As such the book can be highly recommended. The fact that so little psychoanalytical and psychiatric jargon is used makes it particularly valuable for the person not trained in psychoanalysis.

The final chapter entitled "Theoretical Review" presents some of the psychoanalytic theory in a manner intelligible to the average medical reader. There is also a glossary of ten pages which defines a number of psychoanalytic and psychiatric terms.

* * *

UNIPOLAR LEAD ELECTROCARDIOGRAPHY. By Emanuel Goldberger, M.D., Montefiore Hospital, New York. Lea & Febiger. $4.00.

This book is a discussion of the author's experience in utilizing unipolar precordial leads and his own augmented unipolar extremity leads. He is well-qualified to write this monograph in view of his original contributions in the field and his many publications delineating the various abnormal electrocardiographic patterns. The monograph is not a textbook of electrocardiography, but is the only available book that attempts to summarize our present knowledge of unipolar leads. The text is difficult to read and is not a good introductory book for the inexperienced physician, but has considerahle useful information for the trained electrocardiographer who has not had experience in the use of unipolar leads. The complexities of the discussions of the effects of rotation on electrocardiographic patterns are particularly difficult to visualize.

Goldberger discusses the principles of unipolar leads as compared to bipolar leads, details his simple method of taking unipolar leads, and then defines the basic normal unipolar lead patterns and the various abnormal patterns. His concept of right ventricular and left ventricular basic patterns in the normal subject is most helpful in that it shows that the basic left ventricular pattern is characterized by a small Q wave, an upright R wave and an upright T wave. This is in contrast to the hasic right ventricular pattern which is characterized by a small R wave and a prominent S wave. With these basic patterns, Goldberger feels that unipolar leads taken anywhere in the chest can be related to either the right or left ventricle depending on the position of the heart. Thus, he shows that inverted T waves which normally occur in the right precordial leads in infants and children always occur with right ventricular R-S patterns.

The discussion of left ventricular hypertrophy properly emphasizes the importance of the position of the heart and its relationship to the appearance of the standard limb leads. However, some electrocardiographers would differ from his explanation of the inverted T wave in the left arm leads, such as is pictured in Figure 45. In this patient, the inverted T

wave is explained as being due to marked counter-clockwise rotation about the long axis of the heart, but this could be due to the early pattern of left ventricular hypertrophy. In Figure 49 Goldberger explains the small R wave and deep S wave in V6 as being due to marked clockwise rotation, but does not consider the possibility of an associated right ventricular hypertrophy. His explanations of rotation of the heart in various planes is somewhat difficult to grasp, but it is stimulating, nevertheless, to see an attempt made to explain the varying patterns on a rational basis.

In the discussion of right ventricular hypertrophy, insufficient stress is placed on the importance of the reversal of the normal R/S ratio in both the right and left precordial leads. The discussion of the effects of rotation of the heart is less convincing than in the chapter on left ventricular hypertrophy.

The chapter on bundle branch block is excellent, and great credit is due Goldberger for his appreciation of the fact that the left side of the inter-ventricular septum is the first region of the ventricles to be stimulated. This has been confirmed recently by right heart catheterization in patients which demonstrated a small upright R wave in leads from the right ventricular cavity.

The discussion of myocardial infarction could have been expanded and greater attention could have been given to the occasional necessity for exploratory leads high and laterally over the left chest.

In general, this book can be recommended to the cardiologist as a thoughtful, original presentation of a difficult subject with an attempt to explain physiologically abnormal electrocardiographic patterns and the importance of variable rotation of the heart on its three axes. Inadequate attention has been paid to the ventricular activation time and more data in the nature of clinical and autopsy findings would have been helpful in the support of his concepts. This book can be read with profit by all physicians interested in electrocardiography.

* * *

EXPERIMENTAL AIRBORNE INFECTION. By Theodor Rosebury, with the co-authorship and assistance of the Staff of the Laboratories of Camp Detrick, Maryland. The Williams and Wilkins Company, 1947. Price $4.00.

This unusual monograph appears at an auspicious time when men who worry about the future of our world have constantly before them the spectre of the atomic bomb and conjure fantastically vivid pictures of the widespread biologic harm that might follow in the wake of unleashed atomic energy. Here we have an opportunity to view the potentialities of the biologic "bomb" through the medium of airborne infection, an apparently adequate counterpart, although perhaps less immediately devastating than that given in Smyth's "Atomic Energy." There is much information of immediate usefulness for the benefit of mankind and humanity in Rosebury's small volume. No physician can afford to be unaware of the potentialities of "clouds of pathogenic bacteria" floating freely in the proper ambient of temperature, humidity, and air turbulence.

In order to explain the epidemiology of some communicable diseases, the ancient Greeks referred to *miasmata*—defilement of the air with particles capable of producing infection. Today Rosebury and his associates bring to us scientific proof for the communicability of certain diseases through space without the mediation of contact through touch or fomites. The epidemiology of certain cyclical and seasonal disorders of the respiratory tract becomes much simplified by the application of the data and objective discussions of these authorities. "Experimental Airborne Infection" is a thought provoking book, and for all biologists, including the physician especially interested in Preventive Medicine, it has a particularly poignant message to convey. The book is well illustrated, the details of the experiments are carefully outlined, the data are impeccable, the analyses are strictly objective, and the conclusions derived from the work are the best expressions of orderly minds working toward a common goal.

* * *

MEDICINE. By A. E. Clark-Kennedy, M.D., Fellow of Corpus Christi College, Cambridge. Volume I—The Patient and His Disease. The Williams and Wilkins Company, 1947. $6.00.

A. E. Clark-Kennedy is the dean of the Medical School at London Hospital. He believes that medicine is an art as well as a science and that a true physician must often treat the soul as well as the body of his patient. In this book he gives the reasons and the reasoning for and of his beliefs. In doing so he examines all phases of medicine, attempts to correlate them and to define the broad general principles that underlie them.

This is an enormous task for one man to undertake. The author admits that he must necessarily "trespass in many branches of medicine with which [he is] relatively unfamiliar."

The result of this philosopher-physician assayal is interesting and stimulating. He divides his book into six chapters, each of which may he read independently. In fact a certain amount of reiteration in his pattern of thought makes this a preferable method of reading throughout. He emphasizes "the broad view of medicine" and the fact that the various afflictions and affections of man are the complex result of his genes and his environment. The relationship of man's body and his mind is also repeatedly emphasized against this background. At the end of each chapter is a summary of the material it contains.

The book may be recommended to any philosophically minded practitioner or student. It is not to be confused with a regular textbook. It is, of necessity, an expression of Clark-Kennedy's viewpoint and his, at times, limited knowledge. As such it offers pleasant and provocative reading.

* * *

FATIGUE AND IMPAIRMENT IN MAN. By S. Howard Bartley, Ph.D., Professor of Research in the Visual Sciences, Dartmouth Eye Institute of the Dartmouth Medical School, and Eloise Chute, M.A., Research Associate, Dartmouth Eye Institute of the Dartmouth Medical School. McGraw-Hill Book Company, Inc. $5.50.

The authors of this readable book have as their initial aim the formulation of the precise distinctions between fatigue and impairment. Briefly put, the former is a subjective feeling while the latter is primarily due to the physical effects of extreme expenditures of energy or to unphysiologic environmental conditions. Fatigue and impairment are frequently associated, but each may occur in the absence of the other. This point is not belabored for, as the authors emphasize, many excellent laboratory experiments although truly concerned with physical impairment, are heralded as being concerned with fatigue.

Topics critically considered in the book include: Impairment due to anoxia, visual-fatigue studies, drug action in relation to fatigue, and the relation of nutrition and metabolism to fatigue and impairment. The latter sections contain an interesting and thorough discussion of the emotional factors relating to what physicians frequently designate as "nervous exhaustion." Since this publication is essentially a review of the literature, the authors have been scrupulous in citing their original sources.

The present reviewer finds Fatigue and Impairment a well-organized stimulating book with a pleasing minimum of jargon. Practicing physicians will indeed have little need for a copy but social workers, physiologists, psychologists, and those concerned with industrial or aviation medicine, for example, may assiduously study this report with profit.

MEDICAL JURISPRUDENCE

CALIFORNIA STATUTES PERTAINING TO ISSUANCE OF RECIPROCITY LICENSE TO PRACTICE MEDICINE AND SURGERY

PEART, BARATY & HASSARD, *San Francisco*

A recent case decided by the California Supreme Court discusses California's statutes pertaining to the issuance of a reciprocity license to practice medicine and surgery and may be of interest to members of the medical profession.

In *Mann v. Board of Medical Examiners, Aarons v. Board of Medical Examiners,* and *Burroughs v. Board of Medical Examiners,* 31 A.C. 29, the California Supreme Court had presented to it the question of whether, in certain circumstances, the Board of Medical Examiners of the State of California should be compelled to issue a reciprocity license to practice medicine and surgery. The actions on appeal had been commenced in the Superior Court of the City and County of San Francisco by a proceeding in mandamus to compel the Board to issue the licenses.

In the Superior Court action, judgment against the State Board of Medical Examiners was rendered. On appeal, and in these three companion cases, the California Supreme Court reversed that judgment and held that in the circumstances present in these three cases, the State Board of Medical Examiners was not compelled to issue a reciprocity license to practice medicine and surgery.

The facts giving rise to the controversy were as follows. Dr. M. had studied medicine in the Chicago Medical School from 1932 to 1936 and had been graduated with the degree of Doctor of Medicine in 1936. He served for a year as an interne in a Chicago hospital and was admitted to practice in Illinois in 1937. The same year he was admitted in Massachusetts and in 1940 he was admitted in Texas. In 1940 he applied unsuccessfully in this State for a direct reciprocity certificate; in 1941 he applied to take an examination, but his application was denied. In 1945 he filed a second application in this State for a direct reciprocity certificate based upon his Illinois license. The Board granted his request for a hearing but thereafter denied his application upon the ground that he had "failed to establish that he completed a resident course of professional instruction at a school approved by" the Board.

The main question presented on the appeal was concerning approval of the Chicago Medical School from which Dr. M. was graduated. It was conceded that there was never an express approval of that school, but Dr. M. contended in his pleadings and throughout the trial that there was an implied or de facto approval of the school by reason of the fact that during the years subsequent to 1920 a number of its graduates were admitted to practice in this State. Dr. M. contended, therefore, that the Board's refusal to grant him a reciprocity certificate was arbitrary, discriminatory and constituted an abuse of official discretion.

At the trial the Board showed that in February, 1924, it passed a motion, based on reports on file, that no credentials of any nature should be accepted from certain schools including the "Chicago Hospital College of Medicine."

Dr. M. contended that despite this express disapproval of the school, the Board by its acts showed a de facto or qualified approval in that it had permitted nine graduates of this school to be admitted to practice in this State, and that in the light of this de facto and qualified approval, his application should have been granted.

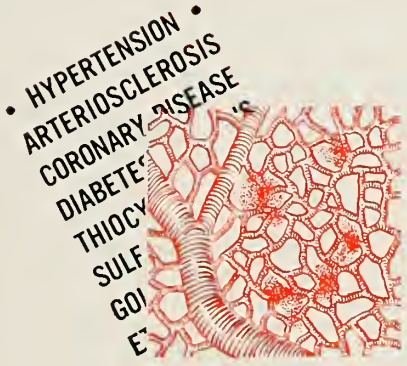
The California Supreme Court in minute detail analyzed the records of the nine graduates of the Chicago school who had been admitted in practice here and showed that in fact many of these graduates had actually been admitted after taking full written or oral examinations. Further, that a 1926 graduate applied in 1943 to take an examination looking to issuance of a reciprocity certificate. His application was denied but in 1944 he was successful in a mandamus proceeding to compel the Board to permit him to be examined.

From an analysis of these cases the California Supreme Court concluded that the action of the Board during the period from 1920 to 1945 did not show such a consistent course of admission of graduates of the school as to establish a de facto or qualified approval. The Court said that the action of the Board was "only for isolated cases of admission for the most part under exceptional circumstances."

In concluding, the California Supreme Court held that the formal and deliberate action of the Board in disapproving the school could not be nullified by less formal or deliberate action nor could nullification be established except by the strongest kind of showing, clear, convincing, and unequivocable. Further the Court held that Dr. M. had failed to sustain the burden resting upon him to prove compliance with the requirements fixed by statute as conditions precedent to the issuance of a reciprocity certificate.

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PROTEIN DEFICIENCY IS CALLED MOST COMMON DISEASE IN WORLD

The most common disease in the world—one that is the basis of many illnesses—does not even have a name in the accepted medical language, according to Francisco de P. Miranda, M.D., director of the National Institute of Nutrition, Mexico, D. F., Mexico.

Writing in a recent issue of *The Journal of the American Medical Association*, Dr. Miranda says that this disease is a deficiency of protein foods or of good quality proteins, or a deficiency of the essential amino acids—the chemical compounds which make up protein. (In the process of digestion proteins are broken down into these basic elements, which circulate freely in the blood until they recombine to build tissue.)

Dr. Miranda's name for this only too common condition is "hypoproteinosis." He writes that its outstanding cause "is the low economic level on which half of the population of the world lives. This economic want leads to the suppression from the diet of the most expensive foods of animal origin, usually badly compensated by an excess of carbohydrates derived from the cheapest cereals or tubers: rice, corn and cassava.

"It is usually a chronic condition difficult to overcome and is essentially different from the plight of the people under the stress of war or famine, which is usually acute and may be remedied by emergency measures, chiefly by cereals.

"It is true that undernutrition, malnutrition and hypoproteinosis may be found superimposed, as now happens in China and India, because to the chronic lack of good quality proteins there is added a lack of certain vitamins, and also an insufficiency of carbohydrates and fats. The extreme condition of lack of all kinds of food leads to inanition, which is usually spoken of as hunger.

"But it is conceivable that the most frequent of all these conditions of want is that produced by insufficient protein or essential amino acids.

"Hypoproteinosis is a condition which specially affects children before six years of age," Dr. Miranda continues. He points out that it affects them by a tendency to stop or delay growth—possibly by preventing the pituitary gland from functioning properly. (The pituitary produces hormones which control the growth—and, particularly, the height—of an individual.)

With either a protein or a pituitary deficiency, the resistance to infection of all kinds is also very low, because the antibodies which fight disease are not readily produced in the blood. Furthermore, Dr. Miranda states, there is a serious tendency to diarrhea which may be connected with a lack of one of the amino acids needed for a healthy liver.

If a child survives to the age of 6, Dr. Miranda observes, he becomes "adapted" to hypoproteinosis and is less likely to succumb to infections other than rheumatic fever or tuberculosis. But the adaptation is at a lower all-around level. And the symptoms of chronic hypoproteinosis will remain even in the adult: dry, scaly skin; cold hands and feet; low blood pressure.

Mothers

APPRECIATE THE SIMPLICITY OF PREPARING FEEDINGS



The preparation of Similac feedings requires only the addition of Similac powder to previously boiled, tepid water—in the proportions you prescribe. Mixing requires only 20 to 30 seconds. The simpler your directions to the mother, the less chance of error on her part. And simpler procedure in preparing feedings makes sanitation easier.

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RECOMMEND LARGER PENICILLIN DOSAGE TO PREVENT INFECTION

To prevent infections of the throat, nose and tonsils and consequent recurrences of rheumatic fever, larger oral doses of penicillin should be given than have usually been recommended for rheumatic fever patients, say three writers in a recent issue of *The Journal of the American Medical Association.*

The writers are Albert Milzer, Ph.D., Kate H. Kohn, M.D., and Helen MacLean, A.B., Chicago, from the Department of Bacteriology and Cardiovascular Research, Medical Research Institute of the Michael Reese Hospital.

The penicillin is given for prevention or treatment of hemolytic streptococcus infections, which start in the upper respiratory tract and destroy red blood cells so that the patient rapidly becomes anemic. Such infections play a part in the development or recurrence of rheumatic fever.

The study reported by the writers involved 114 children with rheumatic fever, all attending the same special school for children with rheumatic heart disease. Over a period of at least five months, 64 of these children received an oral dose of 50,000 units of penicillin twice daily. The remaining 50 children received no penicillin but were in constant daily contact with the others. After the test group had received penicillin daily for at least four months, throat cultures were made from all 114 children.

Strains of beta hemolytic streptococci isolated in

(Continued on Page 40)

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This calls for "tailor-made" training. The *measurements* must be suited to each individual; the *style* must be acceptable to the group. An individualized program is required which will release intense hostilities, round out emotional growth, unfetter intellectual capacities, and assist each child to achieve a place in the world which will be acceptable to himself, to his parents, and to the community.

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An initial dose of 100 mg. three or four times daily is suggested to alleviate severe symptoms. As a maintenance dose or for less severe symptoms, 50 mg. several times daily may be adequate. While no harmful effects have been reported, a total daily dose exceeding 400 mg. (0.4 Gm.) is not recommended, nor continuous administration beyond eight weeks until more is known about the drug.

Try this new antihistaminic on your next ten cases. Your pharmacist has THENYLENE Hydrochloride in sugar coated tablets of three sizes, 25 mg., 50 mg. and 0.1 Gm. (100 mg.) in bottles of 100 and 500 tablets. ABBOTT LABORATORIES, NORTH CHICAGO, ILLINOIS.

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BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA

By FREDERICK N. SCATENA, M.D.
Secretary-Treasurer

Board Proceedings

A meeting of the Board of Medical Examiners was held at the Biltmore Hotel in Los Angeles, March 1 to 4, 1948, at which time 134 candidates appeared for the written examination.

The following action was taken by the Board regarding the status of licentiates at the meeting held on the above-mentioned dates:

John Joseph Allen, M.D.—License revoked, provided, however, that execution of the order of revocation be stayed and respondent placed on probation for a period of five years with specified terms and conditions.

William Le Grande Cooper, Drugless Practitioner. License revoked.

Cecil Valentine King, M.D.—License revoked, provided, however, that execution of the order of revocation be stayed and respondent placed on probation for a period of five years with specified terms and conditions.

Scott Scowcroft McCune, M.D.—License revoked.

Alfred Lamar Porter, M.D.—License suspended for one year followed by five years probation with terms.

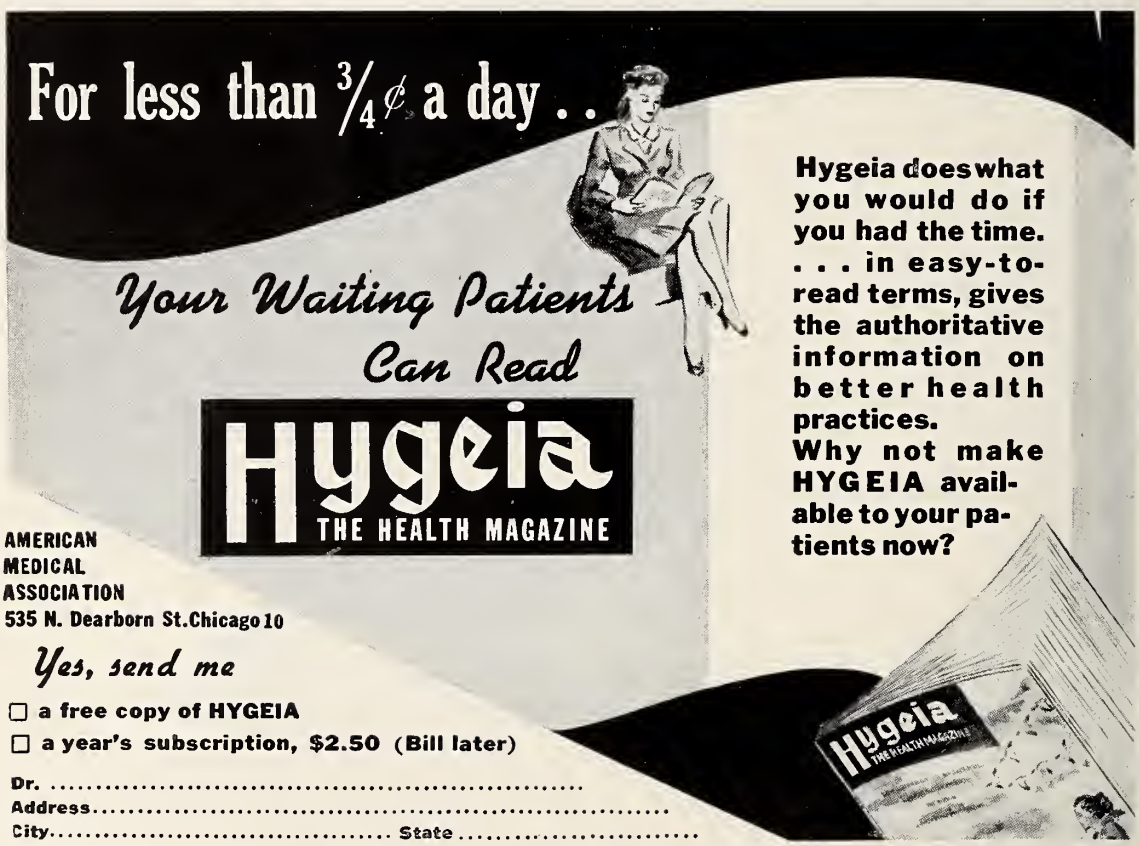
Walter Steinberg, Chiropodist — Probation for three years.

Ralph Wagoner, Chiropodist — Reprimand by President of Board and one year probation.

Wendel William White, M.D.—License revoked.

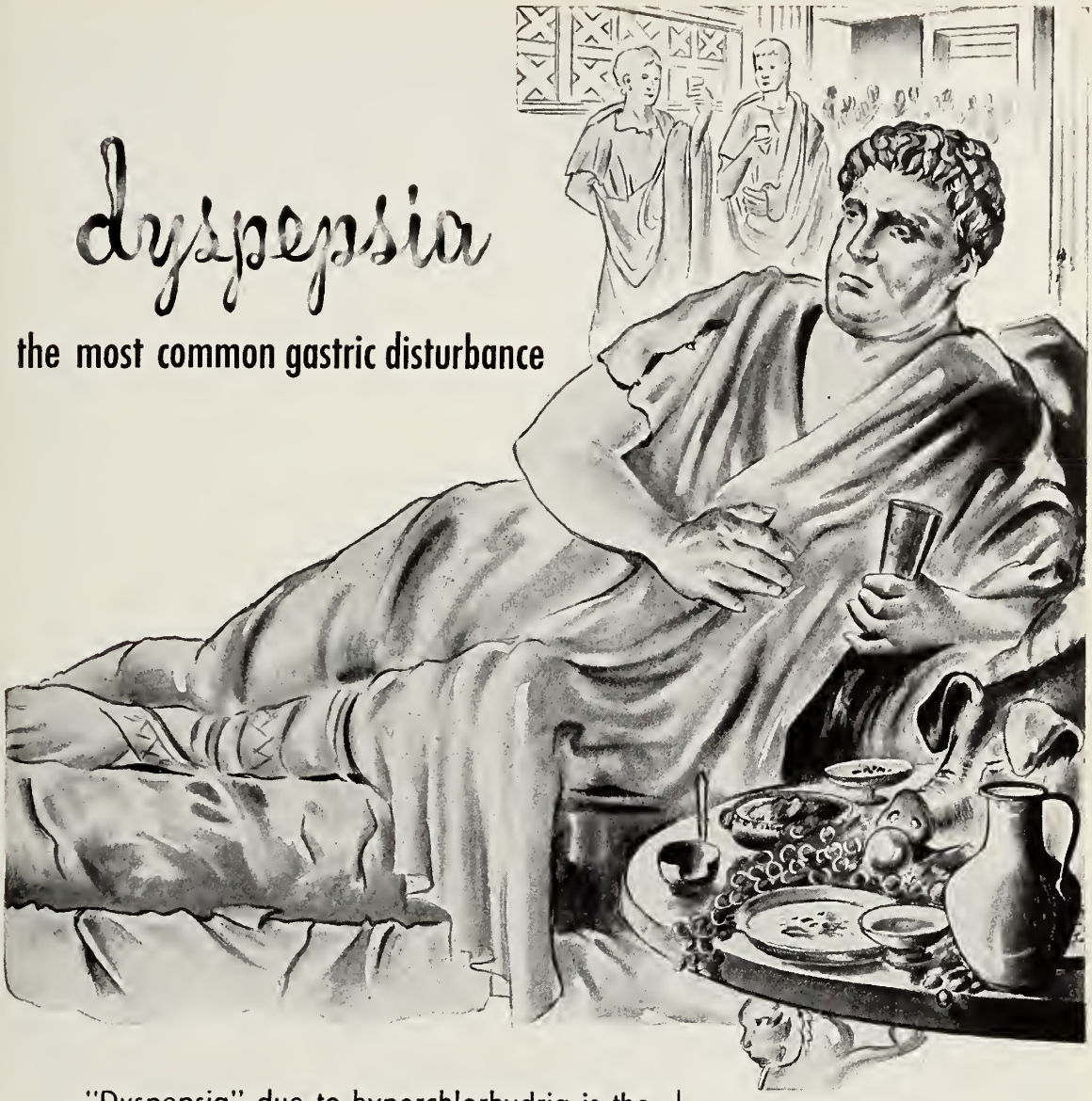
News

"Housman's Medical License Appeal Rejected by Court—California's State District court of appeal rejected another attempt by Nathan S. Housman toward reinstatement as a practicing physician yesterday. It accompanied its decision with a stinging rebuke for the ex-convict and Egan murder case figure. . . . The court denied Housman's petition for a writ of mandate to compel the State Board of Medical Examiners to issue him a license to resume medical practice, holding that he had presented insufficient evidence of his claimed rehabilitation. . . . And in reaching that conclusion, the court found that Housman 'contributed nothing in the way of service' during the last war, and added: 'A man who has had his medical license revoked for the commission of a felony cannot stand idly by when his country is in dire peril, contribute nothing in the way of services and then successfully contend that he has so rehabilitated himself as to compel the restoration to him of his license.' . . . Moreover, the court's opinion took occasion to note that during the war Housman, instead of entering military service or war work, was apparently contented in 'looking after his own financial interests, and enjoyed himself at his club and the race track.' . . . Housman, now 53, was paroled from San Quentin in 1942, after serving thirteen months for perjury and offering and preparing false evidence. The charges were based on his defense during a previous misdemeanor trial on charges of failing to maintain proper records of narcotic prescriptions." (San Francisco, *Examiner*, March 12, 1948.)



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RECOMMEND LARGER PENICILLIN DOSAGE TO PREVENT INFECTION

(Continued from Page 36)

the throat cultures of 87 per cent of the group receiving penicillin were found to have become at least 16 times more resistant to penicillin than is true in routine tests of sensitivity to the drug prior to treatment.

Forty per cent of beta hemolytic streptococci from the group which did not receive penicillin were also significantly resistant to the drug. The writers explain this by the frequent opportunity for cross infection between the two groups, since they were in constant contact for at least four months before the throat cultures were made.

"Because our results show the development of significant resistance of beta hemolytic streptococci to penicillin, additional experiments are being planned in which larger oral doses of penicillin will be given daily for prophylaxis against recurrence of rheumatic fever," the writers state.

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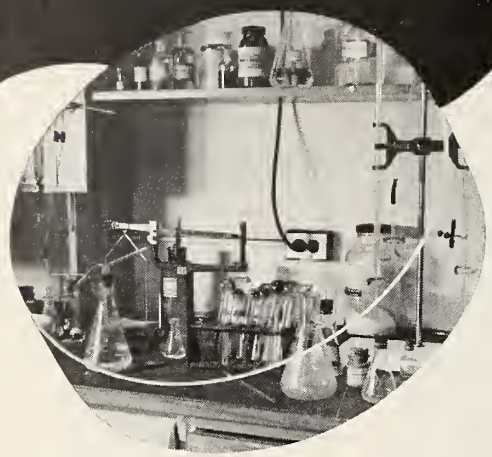
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INFLUENZA VACCINES NOT YET RELIABLE FORM OF PROTECTION

Further investigations are necessary to increase the effectiveness of present influenza vaccines, according to two articles appearing in a recent issue of *The Journal of the American Medical Association.*

Both articles report on influenza epidemics in schools where a large number of the students had previously been vaccinated. In both schools the vaccinated students seem to have been as susceptible to the disease as the unvaccinated. This failure of the vaccine to afford protection was explained, at least partially, in both instances by the fact that the epidemic strain of virus, though belonging to the same general type, differed from the strains present in the vaccine.

The writer of the first article, Arie C. Van Ravenswaay, M.D., Boonville, Mo., states that in December, 1946, 237 of 527 cadets at Kemper Military School, Boonville, received a commercial vaccine consisting of strains of influenza virus, types A and B. Until mid-February, 1947, relatively little respiratory disease was observed in the cadet corps. During the period from February 15 to March 1, however, 48 patients with influenza A were admitted for hospitalization in the school dispensary from the vaccinated group of 237 and 79 from the unvaccinated group of 284. This represented an incidence of 20.2 per cent from the immunized group and 27.8 per cent from the non-immunized group.

Blood studies indicated that the vaccine as administered had been potent, but eventually it was shown that the strain of influenza A prevalent during the winter of 1946-47 had been quite dissimilar from those contained in the influenza virus vaccine available at that time. "Vaccine now available contains this strain which has been designated as FM-1," Dr. Ravenswaay comments.

The authors of the second article are M. M. Sigel, Ph.D., F. W. Shaffer, M.D., M. Wiener Kirber, Ph.D., A. B. Light, M.D., and W. Henle, M.D., from the Children's Hospital of Philadelphia (Department of Pediatrics, University of Pennsylvania School of Medicine) and the Department of Bacteriology, Women's Medical College, Philadelphia.

They write that early in March, 1947, an epidemic of influenza type A occurred in a school for boys in New Jersey, 88 per cent of the 521 students having been vaccinated early in December, 1946. (Here, too, the vaccine used was a commercial one of combined types A and B.) Of those who had received the vaccine, 54 per cent were considered to have been affected either moderately or mildly, whereas this was true of only 49 per cent of the small group of unvaccinated students.

"There are two points which require particular notice," the doctors observe: "(a) the epidemic occurred three months after vaccination, and (b) the epidemic strain of virus was notably different from the strains in the vaccine. It seems, then, that one must aim at prolongation of the immune response and increased cross protection."

He that puts on a public gown must put off a private person.

—Proverb

CANCER ONE OF TOP KILLERS OF CHILDREN UNDER 14, SAYS DOCTOR

A cancer control program for children is urgently needed, according to Harold W. Dargeon, M.D., New York, writing in a recent issue of *The Journal of the American Medical Association.*

"Only comparatively recently have cancer and related diseases received attention as an important child health problem," he points out. "In the last decade cancer, leukemia, and other tumors have exceeded almost all common diseases among the causes of death in certain age groups during childhood."

Dr. Dargeon is from the Children's Tumor Registry and Pediatric Service of Memorial Hospital, Center for Cancer and Allied Diseases, New York.

"Among the causes of childhood mortality in 1942 in the United States cancer and allied diseases stood tenth in the two year age group." Dr. Dargeon observes; "third, from three to 10 years of age, and sixth, from 10 to 14 years of age. In New York in the three year period 1942 to 1944, the deaths from neoplastic diseases during childhood exceeded those from all forms of tuberculosis. Wider recognition of this high mortality would stress the need for greater effort toward the establishment of early diagnosis of neoplasms in children.

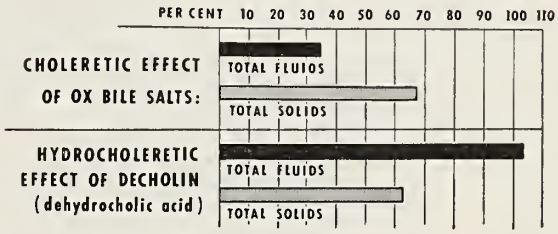
"Parents often remark that treatment for their child was not sought earlier because they had supposed that cancer was always fatal in a child. The prognosis is often unfavorable, but a constantly hopeless attitude in the presence of cancer in a child is not justified. A particularly important age group in which reduction in the death rate might be realized is that from birth to five years of age. Not only do the largest number of deaths, by five year age groups in children, occur in the age period from birth to five years of age, but also a large number of the curable types of cancer are found in the preschool child.

"Most types of tumors present in children are seldom observed after maturity, although they have been described in the adult. Studies of large series of cases indicate that there are six sites most frequently affected by cancer in children: (1) the bones; (2) the kidneys; (3) the eye and orbit; (4) the lymphatic and blood-forming organs; (5) the soft somatic tissues, and (6) the nervous system.

"The need for collaboration in the study of tumors in children has been recognized by all those engaged in this field. The American Academy of Pediatrics has endorsed such a coordinated study as part of its national child health program, by the establishment of a Children's Tumor Registry. The combined experience of various clinics is required to evaluate results, incidence and diagnostic criteria, because the type of tumors observed in each hospital may vary considerably.

"No member of the entire group of physicians concerned with the problem of cancer in children—the surgeon, radiologist, pathologist, pediatrician or health officer—is more important than the family physician, who usually sees the patient first and whose opinion and recommendations are the basis for the family's decisions."

DECHOLIN HYDROCHOLERESIS Encourages Biliary Tract Drainage



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Ivy, A. C., et al: Am. J. Dig. Dis. 7:333 (Aug.) 1940.

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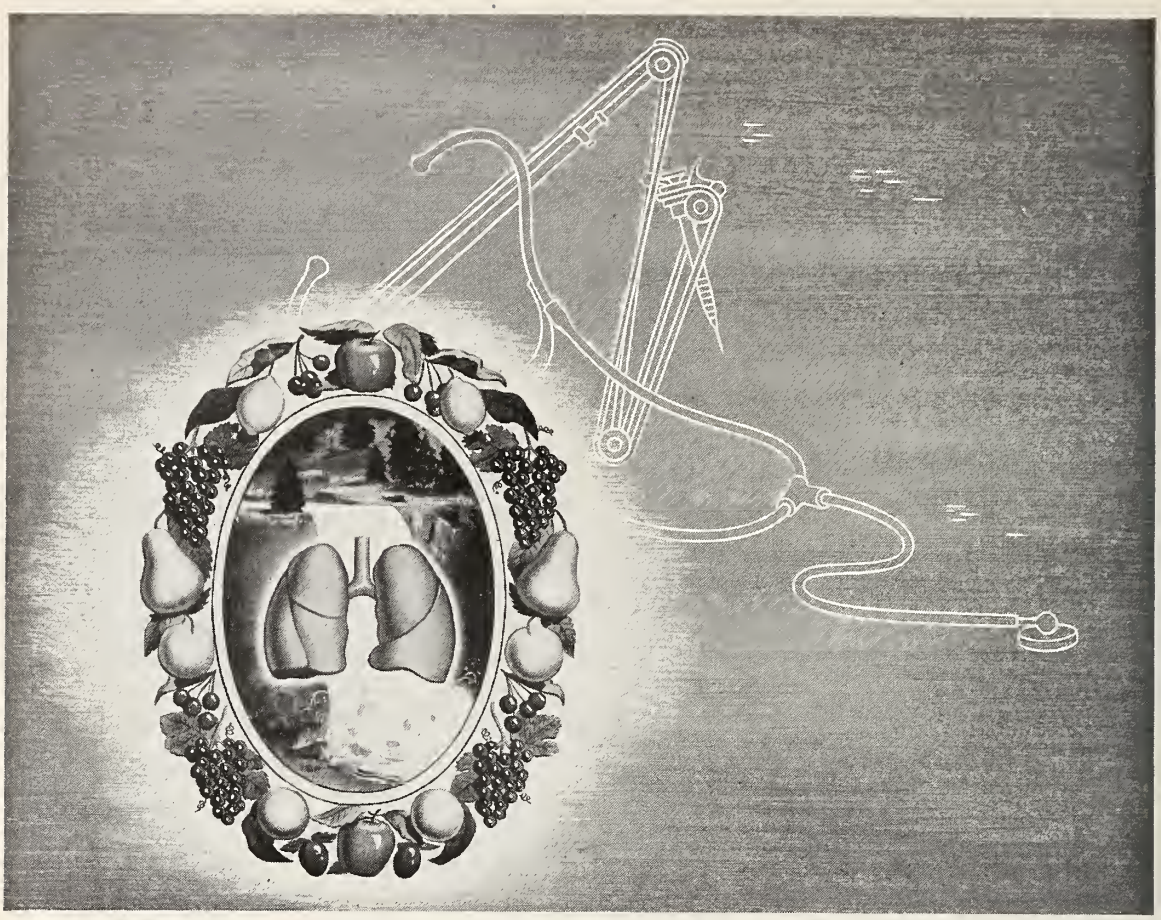
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Morgagni had no microscope. But the Prussian Rudolf Virchow (1821-1902) *did*. So he found that, in diseased flesh, it was really the *cells* which were changed or disordered.

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"RECURRENT COLDS" MAY REALLY BE FORM OF ALLERGIC RHINITIS

Many people who think that they are subject to "recurrent colds" or chronic sinusitis are really victims of allergic rhinitis, according to Leo H. Criep, M.D., Pittsburgh, writing in a recent issue of *The Journal of the American Medical Association.*

Rhinitis is an inflammation of the mucous membrane of the nose. An allergy may be assumed to be responsible for the symptoms, Dr. Criep says, if there is a family history of allergy, a personal history of other allergic manifestations such as asthma, hay fever or eczema, and a history of clinical sensitivity and response to the administration of antihistaminic drugs and epinephrine. (Histamine is released by the tissues in allergic reactions; epinephrine, derived from the adrenal glands, increases the blood pressure.)

"Allergic rhinorrhea is affected by such endocrine factors as pregnancy and menstruation," he writes, "by climatic conditions, by irritating fumes and chemicals, by emotional factors and by nasal obstruction and infection.

"But the underlying causative factor in all these instances is exposure to a substance to which the patient is sensitive. This may be an inhalant, a food, drug, physical agent or bacterium. If the inhalant is a pollen, then the symptoms are seasonal and the condition is referred to as pollen allergy or hay fever. However, seasonal allergic rhinitis may also be produced by the spores of certain molds.

"Other frequent inhalant allergens are animal

(Continued on Page 50)

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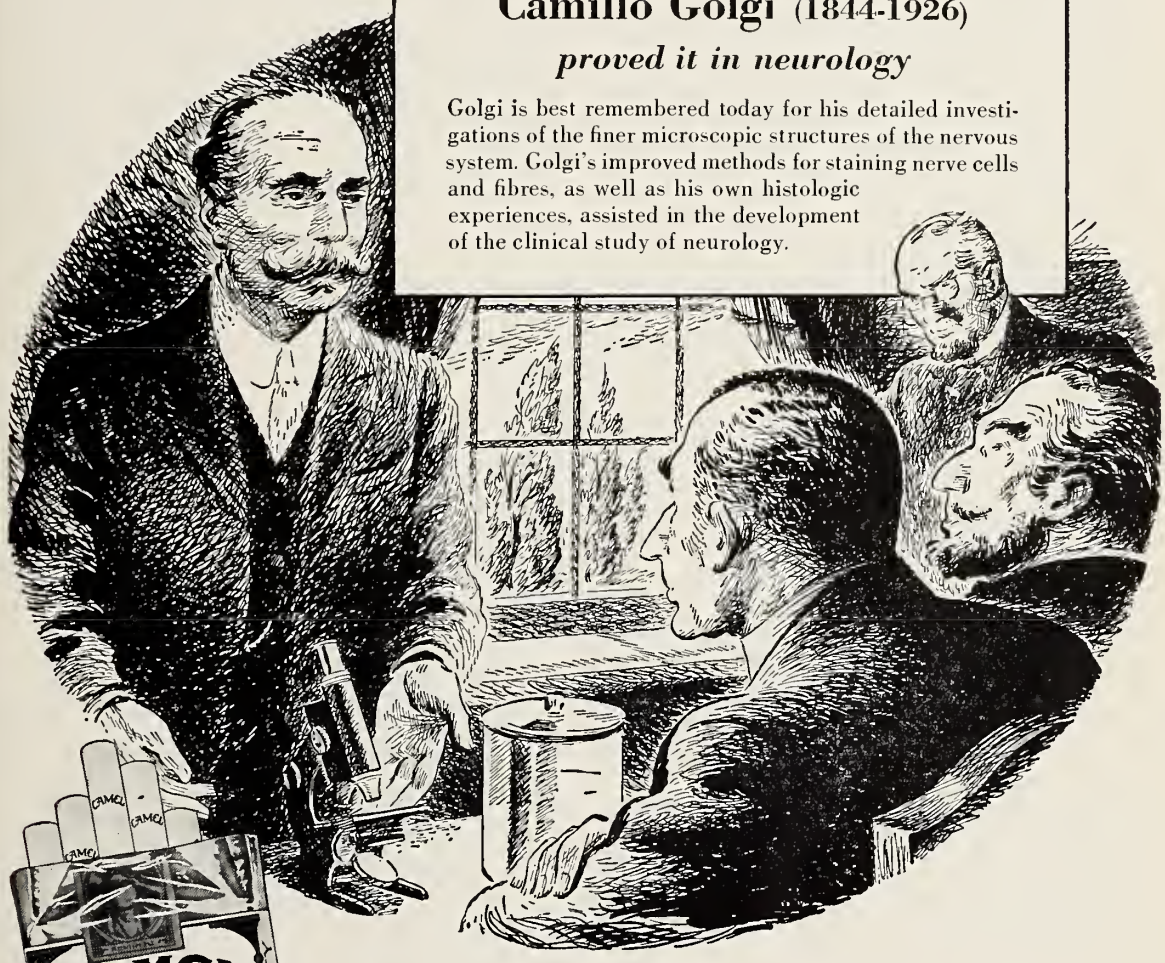
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"RECURRENT COLDS" MAY REALLY BE FORM OF ALLERGIC RHINITIS

(Continued from Page 48)

danders (horse dander, feathers, rabbit hair, cat hair, dog hair), orris root, wool, insecticide, cotton linters and house dust. Milk, eggs and wheat are important food allergens. Next in order are fish, nuts and some vegetables and fruits."

Among the drugs which frequently cause nasal allergy, Dr. Criep mentions coal tar and benzol derivatives, the iodides and bromides, the sulfonamides, penicillin and "argyrol." Some patients also react with allergic nasal manifestations even to heat, sunlight and cold—particularly cold.

In order to decide which of these agents produce the patient's symptoms, Dr. Criep points out that there must be a carefully taken history and special sensitization tests. The latter include tests in which small amounts of the suspected substances are injected just under the skin or into the sac of the delicate membrane which lines the eyelids and tests in which the patient merely sniffs a few grains of the suspected substance. If foods are suspected, the patient is given trial or elimination diets which include only four or five foods. The effect on the patient's clinical condition of enlarging the diet by supplying additional foods is then noted.

Allergic rhinitis is not treated simply through avoidance of the substances to which the patient is allergic, but through desensitization with increasing doses of those same substances, with medication

(Continued on Page 52)

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"RECURRENT COLDS" MAY REALLY BE FORM OF ALLERGIC RHINITIS

(Continued from Page 50)

which gives relief from symptoms, with treatment of the nasal infection, and with psychotherapy.

"Allergic rhinitis of long standing produces profound emotional changes," Dr. Criep concludes. "Appetite is impaired; losses in weight occur; sleep is disturbed; work and efficiency are interfered with, and the patient is not well. It is equally true that emotional upheavals frequently increase the severity of the nasal symptoms. Hence, there is necessity for proper evaluation and understanding of allergic patients as human beings."

NURSES HANDLING STREPTOMYCIN MAY DEVELOP SENSITIVITY TO DRUG

Nurses, pharmacists, laboratory technicians and others concerned with the administration or handling of streptomycin are in danger of developing a sensitivity to the drug, three doctors state in a recent issue of *The Journal of the American Medical Association*.

The writers are Solomon M. Rauchwerger, M.D., Frederick A. Erskine, M.D., and Walter L. Nalls, M.D., from the Department of Medicine and Surgery, Veterans Administration, Oteen, N. C. They report that when over a period of 20 months streptomycin

(Continued on Page 54)

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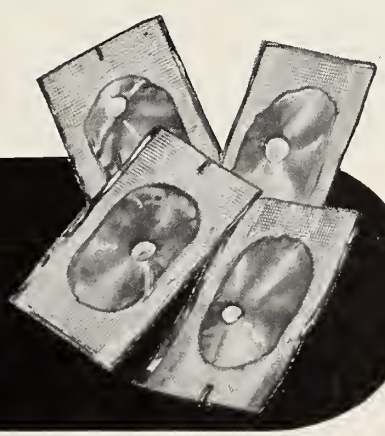
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NURSES HANDLING STREPTOMYCIN MAY DEVELOP SENSITIVITY TO DRUG

(Continued from Page 52)

was administered to 233 patients in the tuberculosis hospital at Oteen, N. C., six nurses developed such a sensitivity. In every case the first symptom was a rash on the hands, followed by intense itching. Five of the six nurses also showed involvement of the area around the eye socket. Pyribenzamine proved more effective than benadryl for relief of symptoms.

SAY INFLUENZAL MENINGITIS IS TREATED BETTER WITHOUT SPINAL PUNCTURE

Recovery from influenzal meningitis is more prompt and complications are fewer when treatment by spinal puncture is omitted, according to two doctors in a recent issue of *The Journal of the American Medical Association.*

The writers are Archibald L. Hoyne, M.D., and Rowine Hayes Brown, M.D., from the Municipal Contagious Disease and Cook County Disease Hospitals, Chicago.

Influenzal meningitis is a type of inflammation of the three membranes which envelop the brain and spinal cord. It is caused by an influenzal virus, but its symptoms resemble those of other types of bacterial meningitis.

Rare in adults, the disease was formerly almost universally fatal. The sulfonamide compounds, specific anti-influenzal serum and streptomycin have

(Continued on Page 58)

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SAY INFLUENZAL MENINGITIS IS TREATED BETTER WITHOUT SPINAL PUNCTURE

(Continued from Page 54)

all made the picture more optimistic, but even today there is no standard accepted for their application. Many doctors still believe that numerous spinal taps for drainage are necessary even after diagnosis has been established by spinal tap. Furthermore, when the National Research Council released streptomycin for treatment it advised that the new antibiotic be injected by spinal puncture.

The Chicago doctors' conclusion is based on a dozen years of experience in the treatment of meningitis. In their article they report specifically on 14 consecutive patients with influenzal meningitis treated at the County hospital in 1946 and 1947 and 16 consecutive patients treated at the Municipal hospital in 1946. There was only one death in each group, and in both of the fatal cases the patients had been given streptomycin by spinal puncture as well as intramuscularly. On the other hand, 23 of the 28 patients who recovered had received no treatment by spinal puncture after diagnosis. These 23 had been given streptomycin intramuscularly, had been treated with serum, or had received sulfonamide compounds —sometimes all three.

"The primary purpose for a lumbar puncture should be to establish a diagnosis," Dr. Hoyne and Dr. Brown conclude.

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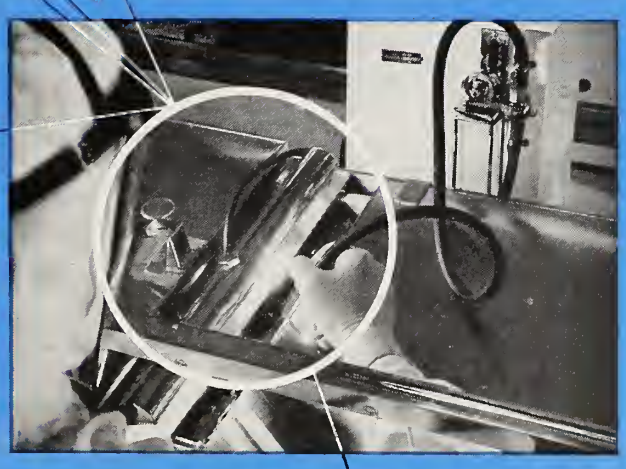


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Circumspect

In these days of distinctive names for everything from extra-fare trains to the color of women's stockings, it is not surprising to learn that the obstetrical ward of the Stanford University Hospital, like the Fairmont Hotel in the same city, has a place of rendezvous placarded with the name *Cirque Room*.

* * *

From the Roseville, Calif., *Press*:

Laboratory Rebates to Physicians Deplored
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"Statements deploring the recently exposed practice of alleged rebates by certain laboratories to physicians were issued jointly yesterday at Los Angeles by the California Chiropractic Association and the California Society of Chiropractic Roentgenologists.

"The nearly 2,000 members of the California Chiropractic Association throughout the state are strictly opposed to this unethical practice, Dr. R. C. Lieser of Roseville, C. C. A. president, declared at the association offices in Los Angeles.

"Dr. C. B. Eacrett, president of the C. S. of C. R., also declared that the x-ray and diagnostic laboratories serving the profession do not grant such rebates.

"The C. A. A. further went on record as stressing quick response by members to emergency calls, so that no serious consequences could result from failure of a chiropractor to render prompt treatment when needed."

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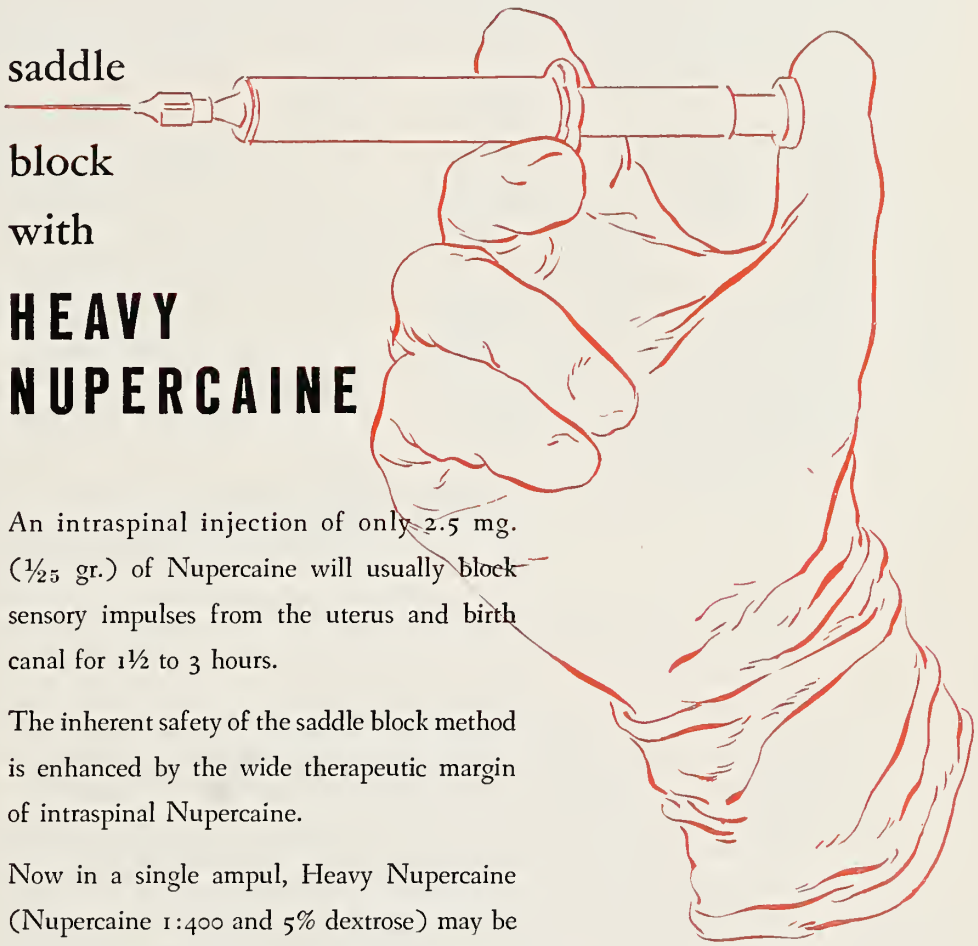
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WAR YEARS SHOW INCREASE IN DUODENAL ULCERS IN POPULATION

Duodenal ulcers in women showed a definite increase during the war years, according to an article by Dr. Maurice Feldman of Baltimore in a recent issue of *The Journal of the American Medical Association.*

Dr. Feldman reports on a study of 1,154 cases of duodenal ulcer over a 10 year period, prewar, 1937 to 1941, and during and immediately following the war, 1941 to 1946. Of the 1,154 cases, there were 480 cases during the prewar period and 674 cases observed during the war years.

A duodenal ulcer is an open sore located in the first part of the intestine.

"It is the consensus that the incidence of duodenal ulcer increased in the civilian population during the war," the article says. "One would naturally expect an increase in the incidence of ulcer, because of the tremendous amount of emotional strain, tension and overwork during the war.

"It was of interest to determine whether the sex incidence changed during the war. There was an increase in the number of females with peptic ulcer seen during wartime.

"Of the 480 persons with duodenal ulcer noted in the prewar period, 395, or 82.3 per cent, were males and 85, or 17.7 per cent, were females. In the war period group, there were 674 persons, of whom 565, or 83.8 per cent, were males and 109, or 16.2 per cent, were females.

"There is an impression that duodenal ulcer occurred in women at a later age than in men.

"The majority of persons with duodenal ulcer begin to have symptoms between the ages of 20 and 35," the doctor found. "Often there is considerable lapse of time between the onset of the ulcer and the symptoms.

"The determination of the duration of the ulcer has always been a problem. In the majority of cases the duration of symptoms ranged from one to 10 years, the predominant period being five years."

In this study, according to the author, "a comparison was made of the number of cases of hemorrhage occurring in each five year period. In the 1,154 cases, there were 41 cases of massive hemorrhage. In the 480 cases, there were 15, while in the 674 cases of the war period it was noted in 26 cases. There appeared to be a slightly greater incidence of hemorrhage in females during the second period.

"Pain in relation to food is one of the most characteristic symptoms of duodenal ulceration. However, pain is not always present. In this series of 1,154 cases, 703 presented a history of pain; of these, 595 gave the characteristic relation of pain and food."

There has been a marked increase in the number of cases of gastric ulcer in the aged, according to an article by Drs. Henry A. Rafsky, Michael Weingarten and Charles Krieger, all of New York, in this same issue.

"The study is based on a series of 1,800 successive admissions for peptic ulcer to two hospitals from 1941 to 1947. Three hundred and seventy-eight patients, or 22.2 per cent, were 60 years of age or older on admission. In 106 cases the first symptoms

(Continued on Page 16)

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WAR YEARS SHOW INCREASE IN DUODENAL ULCERS IN POPULATION

(Continued from Page 14)

of ulcer occurred after the patient had reached the age of 60 years. There was some doubt in 25 as to whether there had been any evidence or complaint referable to the ulcer prior to the age of 60. These cases were excluded from this study, leaving 81, or 4.5 per cent, of the 1,800 patients in whom the history definitely indicated that the onset of the ulcer symptoms occurred after the fifth decade," the doctors report.

"The serious complication of hemorrhage appears to be more frequent in patients over 60 years of age. Complications of ulcer seem to occur more frequently in those persons with an onset of symptoms late in life.

PRECAUTIONARY MEASURES SET UP FOR EPIDEMICS OF RINGWORM OF SCALP

Public health measures designed to prevent another epidemic of ringworm of the scalp among children have been drawn up by a group of New York skin specialists, according to an article appearing in the current issue of the Archives of Dermatology and Syphilology, published by the American Medical Association.

Ringworm of the scalp, which was one of the physician's main problems during the war years, is a fungous growth. It develops one or more circular patches of redness and crust formation. The hairs in the affected region become loose and break off just above the skin surface, leaving short stumps.

The main reason for its spread it attributed by the authors, Drs. Frank C. Combes and Howard T. Behr-

(Continued on Page 17)

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PRECAUTIONARY MEASURES SET UP FOR EPIDEMICS OF RINGWORM OF SCALP

(Continued from Page 16)

man, New York, to lack of parental observation and control, and cleanliness.

"It is a great tribute to American medicine," the doctors write, "that recognition of the severity, contagion and extent of the disease brought forth speedy measures of isolation, control and treatment. Treatment centers were established in strategic areas throughout the country.

"Various new drugs have been employed with success in certain types of ringworm of the scalp, but the major weapon of control in the so-called 'human' type is x-ray treatment.

"In a certain percentage of cases, reinfection (from contaminated hats, articles of clothing, other children or infected members of the same family) may occur. Following x-ray treatment all infected articles of clothing should be burned."

The New York skin specialists have outlined the following set of measures designed to control susequent epidemics of ringworm of the scalp:

1. Ringworm of the scalp should be made a reportable disease.
2. The public should be reached through the press, pamphlets and radio.
3. It is recommended that city-wide, complete and periodic inspection of children who are in institutions be made by qualified physicians.
4. Barbers should be told about epidemics and

(Continued on Page 20)

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PRECAUTIONARY MEASURES SET UP FOR EPIDEMICS OF RINGWORM OF SCALP

(Continued from Page 17)

cautioned to be on the lookout for sores on the scalp.

5. Children should wear hats as a precaution against infection in public places.

6. Clipping and shaving of the hair prior to x-ray treatment should be done in the clinics at which infected children are treated. The parents should be warned not to take an infected child to a barber.

7. The department of health should register equipped clinics and qualified physicians for the treatment of ringworm of the scalp.

8. It is recommended that no child be permitted to return to school until he is entirely free from infection.

SECOND YEAR PERIOD OF ADJUSTMENT FOR BOTH MOTHER AND BABY

"Significant behavior disturbances in babies are relatively infrequent during the first year of life as compared with the second," according to Dr. Benjamin Spock, Rochester, Minn., in a recent issue of *The Journal of the American Medical Association.*

Feeding problems are most common during the first year while the second year brings pronounced changes in an infant's personality and behavior and calls on the mother for entirely new resourcefulness and adaptability.

During the first year the mother has become accustomed to baby's automatic cooperation, but at about a year the infant moves independently. He

(Continued on Page 22)

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SECOND YEAR PERIOD OF ADJUSTMENT FOR BOTH MOTHER AND BABY

(Continued from Page 20)

explores constantly; his ego is taking definite shape; he senses that he is a separate person and is entitled to wishes and a will of his own.

"As he becomes more insistent on his independence from his mother, he simultaneously becomes aware of his dependence," the doctor writes. "Undoubtedly, it is part of his total pattern of emotional development that when he has the ability and the desire to explore away from his mother he also has the instinct to hurry back to her noisily when he meets something strange and potentially dangerous."

More feeding problems begin during the second year than during any other period. The irritation of the frustrated mother and the balkiness of the child easily spread into other aspects of their relationship.

"Psychiatrists," Dr. Spock continues, "have stressed the danger to the child's emotional development of too early and too rigorous toilet training. Pediatric observation would indicate that the earliness at which training efforts are begun is much less important than the reaction of the child and the attitude of the mother during the precarious second year.

"If the mother is a stable, affable sort of person, she finds ways to get along with this new child, even if she has to go against current dogma on diet, toilet and discipline. But the insecure or the dominating mother is easily thwarted.

"Although the pediatrician cannot hope to change the mother's basic nature, I believe he can give her advice that minimizes the clashes. He should explain

(Continued on Page 24)

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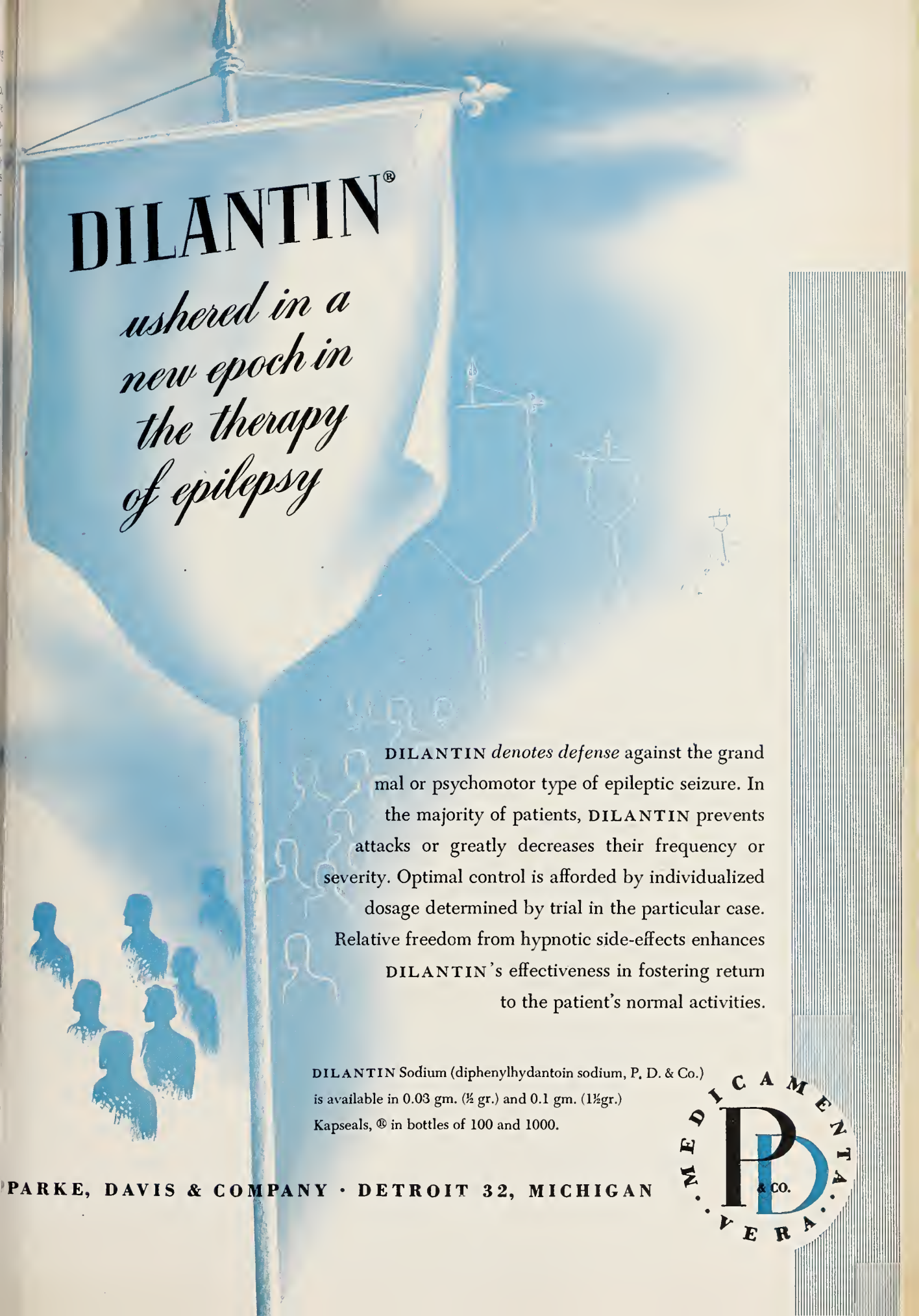
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SECOND YEAR PERIOD OF ADJUSTMENT FOR BOTH MOTHER AND BABY

(Continued from Page 22)

at the start that the baby will be a better judge than mother or pediatrician of how much he needs at each feeding, warn the mother when starting solids to give the child time to get used to them and advise against weaning until the child shows readiness, even though it is not until the middle of the second year."

In conclusion Dr. Spock states "we need also experimentation with some sort of guidance nursery or guidance playground where one and two year old children, too young to be left at nursery schools, could come to play. Their mothers could look on, learn from each other and have the opportunity when they felt the need to ask advice from an expert nursery school teacher or psychiatric social worker."

BIG, BRAWNY MUSCLES NO TRUE INDICATION OF PHYSICAL FITNESS, COMMITTEE REPORTS

Big brawny muscles—the kind that athletes often display in competitive sports—are no true indication of physical fitness, according to a report of the subcommittee of the Baruch Committee on Physical Medicine which appears in a recent issue of *The Journal of the American Medical Association.*

"A clear definition of the term physical fitness is elusive," says the committee, which is composed of Drs. Robert C. Darling, Ludwig W. Eichna and Harold G. Wolff, of New York, and Clark W. Heath, of Cambridge.

"The purely physical requirements of various tasks, whether they be jobs or physical feats, are too

(Continued on Page 28)

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BIG, BRAWNY MUSCLES NO TRUE INDICATION OF PHYSICAL FITNESS, COMMITTEE REPORTS

(Continued from Page 24)

varied to be determinable by any one set of criteria," the committee's report says, adding:

"Many instances can be cited in the army and in civilian life of persons well endowed physically who could not carry on practical tasks because of the emotional and psychologic elements involved."

The article pointed to the many persons with poor physical equipment and even defects who, judged by accomplishment, are fit to carry on their jobs. "The only final test of fitness," the report says, "seems to be the ability to perform the task desired without undue fatigue or exhaustion."

The committee explained that it was difficult to set up universal standards of fitness because of "the large number of persons with physical defects who cannot be judged by fixed standards but who, we know, can often carry on an active and useful life," and thereby be considered fit.

"The purpose of the usual medical examination is to discover organic physical defects," the report says. "It is highly desirable, however, to extend the scope of the physical examination. In relationship to fitness it is necessary not merely to discover defects but to consider the potential performance of the patient in spite of his defects. For example, defective sight or hearing, especially if helped by glasses or hearing aids, may be no handicap to daily life. Good insight and strong motivation on the part of the patient can overcome even severe handicaps. In general one may

(Continued on Page 30)

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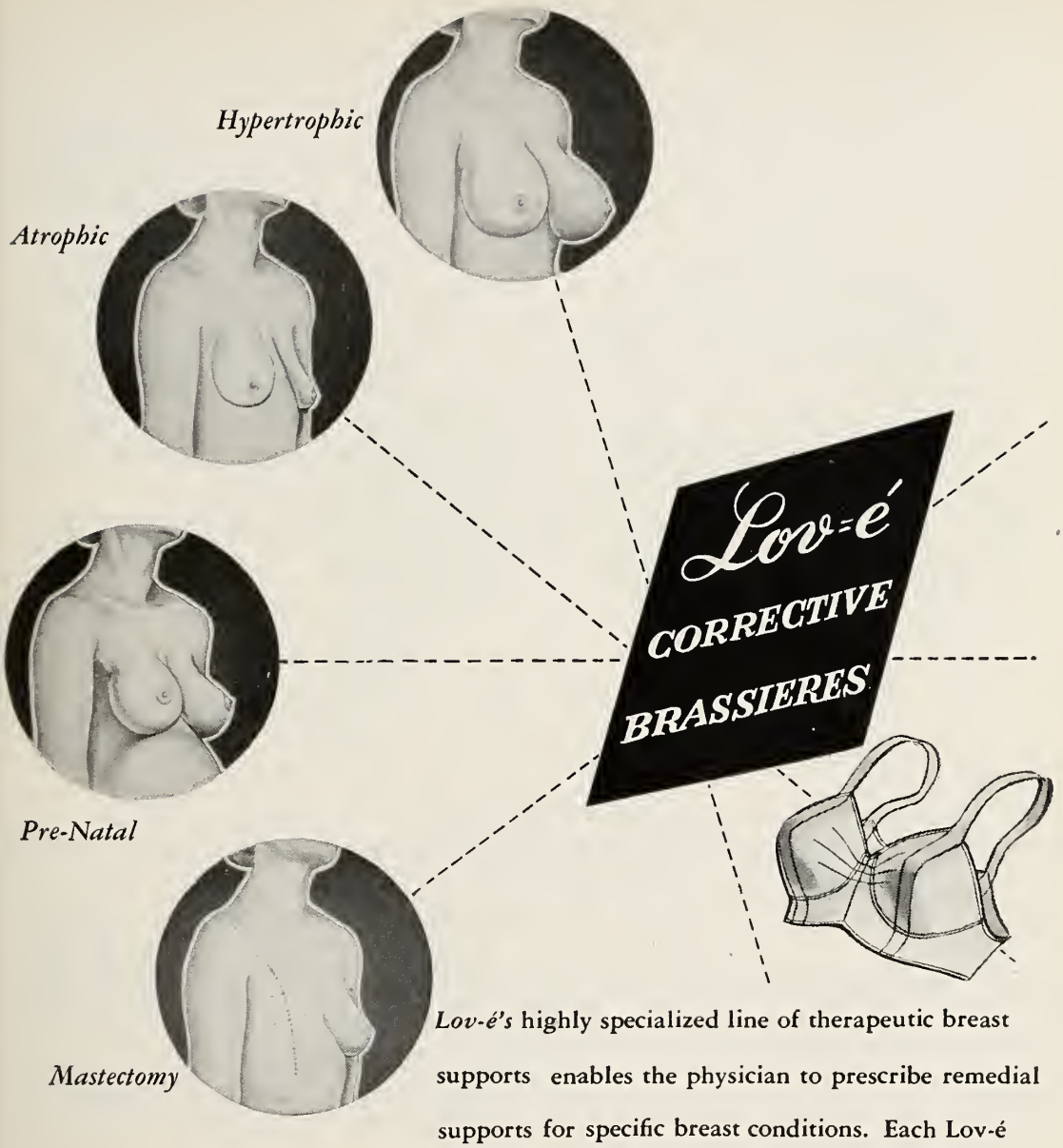
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BIG, BRAWNY MUSCLES NO TRUE INDICATION OF PHYSICAL FITNESS, COMMITTEE REPORTS

(Continued from Page 28)

say that organic disease and abnormalities affect fitness only when they reduce physical and mental activity below that necessary for the effective carrying on the patient's job."

The committee concluded that the routine medical history and physical examination can and should do more than assess physical defects.

The report says in part:

"The physical equipment of the patient and his physiologic response to stress are only a partial though necessary component of fitness. The final test is how he uses his equipment in his play and work. Moreover, he should be able to perform the tasks repeatedly without fatigue and have in addition a reserve to meet and sustain unexpected stresses, should they arise, without being incapacitated by them. A physically-fit person will be able to meet these requirements and still maintain a sense of well-being. This picture of functional health is certainly an adequate goal. Actually there are no satisfactory data to predict that the physically fit subject will have a longer life span, a lower incidence of degenerative disease or a greater resistance to infection than his unfit confrere.

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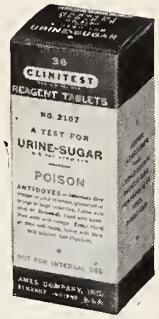
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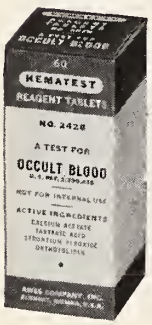
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CHRONIC DISEASE MOUNTS WITH STRESS AND STRAIN OF LIVING

With an estimated 25,000,000 Americans suffering from either disabling or non-disabling chronic disease, two San Francisco physicians believe that the medical profession as a whole soon will have to share in the management of social and psychologic problems in medicine if an adequate job is to be done.

The stress and strain of living can be associated with a multitude of physical reactions, Drs. Jurgen Ruesch and Karl M. Bowman write in a recent issue of *The Journal of the American Medical Association.* Both men are from the Division of Psychiatry of the University of California School of Medicine, San Francisco.

The two doctors, whose article is entitled "Personality and Chronic Illness," state that while disease and accidents killed a great many people in centuries past, thus making longevity rare, the triumphs of medicine have extended considerably the life expectancy in modern times.

"However," the article says, "every single advance in medicine upsets the existing social structure in a population; this unbalance, in turn, creates new medical problems; therefore, one has to recognize that social-psychologic problems created by scientific advances are also a responsibility of medicine."

The writers point out that at the moment the burden is carried by public health services, preventive medicine, population studies and insurance medicine, but that soon the medical profession at large will have to share in the management of these problems.

In discussing the mind-body relation in disease, the doctors cited as examples persons who overeat, who perpetually clear their throat, who scratch their skin, suck their thumb, bite their finger nails, drink liquor, consume barbiturates or expose themselves to accidents.

"In these patients," the article says, "there exist frustrations which are managed by some kind of activity, which in turn leads to deformity, illness or accident."

Touching on outstanding character conflicts of their patients, the doctors said they found that in all men the problem of dependence versus independence was most prominent. "The difference between normal and dependent patients is seen in the fact that dependent persons break down either when the source of dependence is withdrawn, as in sparation, or when achievement and compensatory striving are made impossible. Such is particularly the case with patients who have duodenal ulcer," the article says, adding:

"In women the problem of choice between self love and love of other persons was a primary conflict. It was most clearly expressed in hysterical personalities; being unable to remain attached to others, these women maintained highly unstable relations, which fact was expressed in their high divorce rate. Their affinity to others was characterized not by empathy and the like but, instead, by using these other persons to feed their vanity and to applaud

(Continued on Page 38)

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2. Before you telephone your doctor, make a list of the questions you want to ask him. Have a paper and a pencil handy when you call, so that you may take down his instructions. This way you will save your doctor's time, and remember *accurately* what he tells you.

3. Answer your doctor's questions *fully*. A previous illness may not seem to you to have any bearing on your present condition. But to your doctor it might furnish a valuable clue. Tell him complete facts. Let *him* decide what is important.

4. Follow your doctor's instructions *exactly*. If he prescribes medicine, take it *according to directions*. Remember, a larger dose than that prescribed won't cure you faster. And it might be harmful.

5. Never use medicine prescribed for somebody else, or for a previous illness of your own. However similar your symptoms may appear to you, the nature of your illness may be quite different. Only your doctor can accurately diagnose your trouble and prescribe proper treatment.

6. If your doctor advises an operation, don't put it off. With modern surgery, modern hospital care, you seldom have reason to fear an operation.

7. The new medical treatments you read about in the popular press aren't likely to be news to your doctor. If your doctor has not recommended a new treatment to you, it is probably because there are still some questions about its value, some limitations not stressed in popular reports, or some factors in your case which would make the treatment undesirable or ineffective for *you*.

8. Don't ask your doctor to advise you about members of your family whom he himself has not seen. He cannot risk giving an opinion about a patient of whose condition he has no firsthand knowledge.

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CHRONIC DISEASE MOUNTS WITH STRESS AND STRAIN OF LIVING

(Continued from Page 34)

their own tendency to show off. As long as change enabled these women to assert their desirability things went fairly well, but as soon as marriage and permanency were required these women lost their mechanism of self assertion and broke down.

"It is our impression that in medicine the dependent man and the hysterical woman represent the major cause of invalidism . . . in dependent men and hysterical women the susceptibility to disease and accident is greater, the chance for recovery poorer and the time of convalescence longer."

DOCTORS URGED TO BE ON CLOSER LOOKOUT FOR WEIL'S DISEASE

Weil's disease is disproportionately low in the United States when compared to the incidence in England and continental Europe, according to an article appearing in a recent issue of *The Journal of the American Medical Association.*

A study of 78 cases in Detroit made by the authors, Dr. Joseph G. Molner, Dr. Karl F. Meyer and Herbert A. Raskin, M.S. P.H., Michigan State Public Health Service, supports the contention that this type of infectious disease is not difficult to detect if physicians are on the lookout for it.

Since North Americans show no particular immunity to this disease, such a discrepancy would

(Continued on Page 42)



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DOCTORS URGED TO BE ON CLOSER LOOKOUT FOR WEIL'S DISEASE

(Continued from Page 38)

seem to be due to the failure to recognize cases, the article states.

Weil's disease is characterized by jaundice, fever, muscular pains and enlargement of the liver and spleen. It is caused by microbes carried by rats and dogs. The disease may be transferred to man by some biting insect.

"It is most likely," the authors write, "that only the striking, easily recognized severe forms have been diagnosed and reported. It is known that mild forms also occur which undoubtedly outnumber the severe ones. Therefore, it is readily understandable that unless physicians are aware of the disease, many cases will pass unrecognized."

These infections seem to be most prevalent among men; 73 of the 78 cases in Detroit were men who stated that there was rat infestation on their jobs.

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SKIN ERUPTIONS OFTEN DEVELOP FROM DRUG APPLICATIONS

Skin eruptions are often caused by drugs used to correct an existing disorder, according to an article by Lester Hollander, M.D., Pittsburgh, in the current issue of *Hygeia*, the health magazine of the American Medical Association.

"It is common knowledge among skin specialists," Dr. Hollander asserts, "that both externally applied and internally administered drugs can cause a great variety of skin eruptions.

"Since the actual cause of an eruption is increasingly more difficult to identify as its duration lengthens, and since certain eruptions may precipitate chronic organic damage, physicians have to be on the alert for them. However, most of the annoying skin eruptions of this class are not caused by professionally prescribed medication. The source of a blistery eruption of the hands and feet or a diabolic nocturnal itch is more often found in the consumption of proprietary medicines."

Cold remedies, headache cure-alls and cathartics are among the most common remedies causing skin disorders, the doctor states.

"The kingpin among the many-purposed vitamin B complex groups, thiamine chloride or B_1, not infrequently causes a skin eruption. At times the

(Continued on Page 46)

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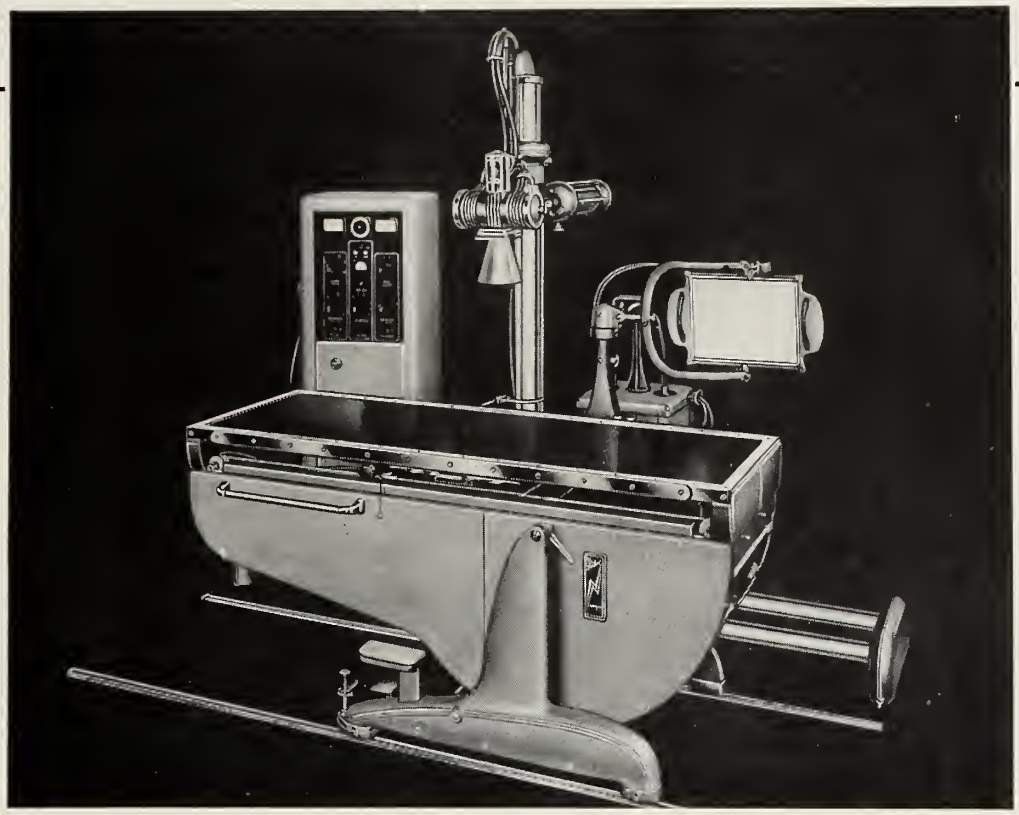
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SKIN ERUPTIONS OFTEN DEVELOP FROM DRUG APPLICATIONS

(Continued from Page 43)

benefits of vitamin B are nullified by the inconvenience, insomnia and nervousness caused by the vitamin itch.

"You can accept it as axiomatic," the article continues, "that any skin disease or eruption which becomes increasingly annoying after the use of a local application is being irritated and not helped by it—even if its 'purity' and 'non-irritating' qualities are certified by movie stars, golf professionals or any such disinterested, self-sacrificing people. Of all these nostrums the so-called athlete's foot remedies are the most noxious."

RECENT INCREASE IN HEART DISEASE IN WOMEN MAY BE FROM SMOKING

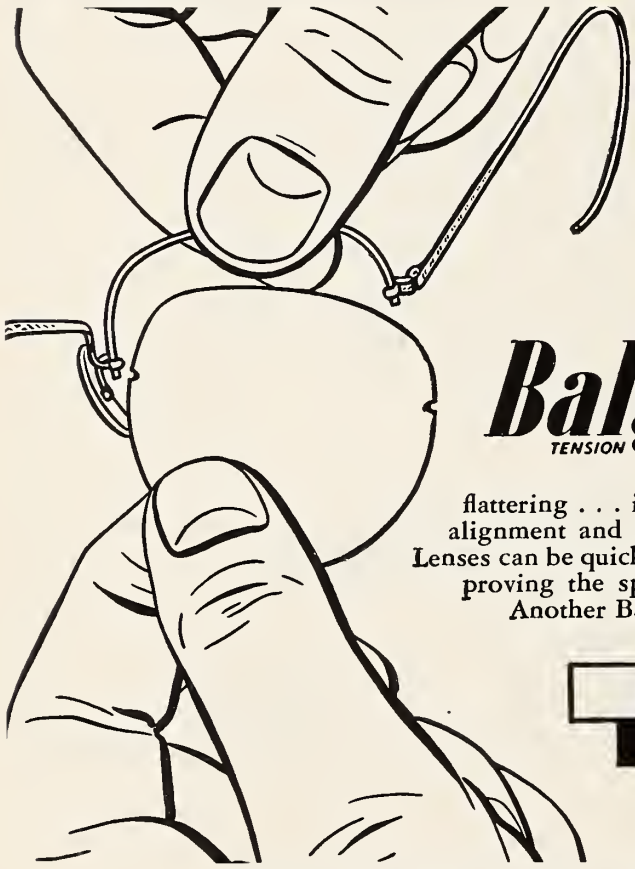
Smoking may have something to do with the higher incidence of coronary thrombosis among women in the past 30 years, according to an article appearing in the current issue of *Hygeia*, the health magazine of the American Medical Association.

"Four groups of one thousand patients each (smokers, nonsmokers, coronary thrombosis and non-thrombosis) were subjected to statistical analysis. On the average smokers were found to get coronary thrombosis 10 years earlier than nonsmokers. Although not a cause of the disease, smoking is considered by many heart specialists to be a factor," the

(Continued on Page 50)

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*Based on average reported values for milk.

RECENT INCREASE IN HEART DISEASE IN WOMEN MAY BE FROM SMOKING

(Continued from Page 46)

author, Irene E. Soehren, Dallas, Ore., states.

In coronary thrombosis a clot forms in one of the coronary arteries, and a portion of the heart muscle is deprived of blood for a length of time sufficient to do damage.

"Probably as many as one man in 30 and one woman in 90 over 40 years of age will suffer an attack of coronary thrombosis this year. Thousands of men and women who have had coronary thrombosis may reasonably expect to live many more years and lead comparatively normal, useful lives. Rest and reassurance are two of the most important forms of treatment.

"The fifth day is the most worrisome," Miss Soehren continues. "All the area of the heart supplied by the closed artery and its branches is incapacitated. Hemorrhage and death of the tissue take place. The height of softness in this area is reached the fifth day, when it is most subject to rupture. If rupture occurs, the internal bleeding is nearly always fatal.

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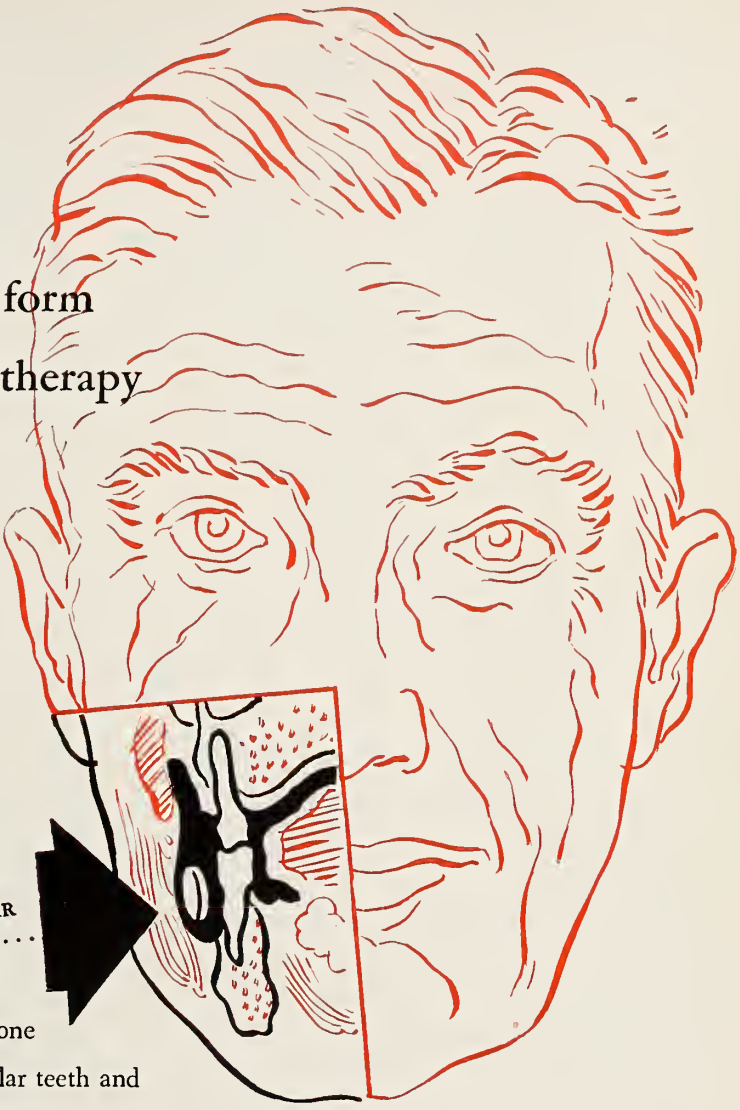
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1. Lisser, H.: Calif. & West. Med., 64: 177, 1946.

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MEDICAL PROFESSION AND PUBLIC JOIN TO COOPERATE WITH AMERICAN CANCER SOCIETY

"Typical of the American way in meeting the challenge of our major problems in disease is the work of the American Cancer Society, representing the highest type of cooperation between a voluntary organization, the medical profession and the public," according to an editorial appearing in a recent issue of *The Journal of the American Medical Association.*

"In the development of its services the medical and scientific department of the American Cancer Society has created four divisions, including a library, a division of statistical studies, a division of service and a division of professional education. The library is being developed as the most complete repository of information on cancer that can be assembled. Each month a bibliography of current literature on cancer is made available to the medical profession. Reprints are being collected for a library service covering every aspect of the cancer problem. In the attack on cancer accurate statistics are necessary, and the division of statistics is now collecting, collating and disseminating all the available information concerning the incidence of cancer and its mortality in relationship to many conditions likely to affect these figures.

"Prominent in the developments of the American Cancer Society is the creation of 'cancer detection centers.' Thus far the statistics division has collected data on 43 centers, and the information derived from this study will guide the future development of similar centers in the United States. The statistics division also aids in the development of records for recording cancer.

"Recent studies show that there are now 324 cancer information services in the United States and a total of 150 cancer detection centers which meet the standards established for such centers by the American College of Surgeons. In addition, there are 35 other centers designed simply to examine apparently well persons for cancer. Investigations indicate also that there are now 407 clinics in the United States which specialize in the diagnosis and treatment of cancer. The estimates show that a clinic may serve effectively a population of 100,000; around 900 additional cancer clinics are needed. Many of the branches of the American Cancer Society are carrying on special services for advanced cases of cancer with terminal illness. Prominent also among the functions of the service division is the work of the field army, which aids with the making of dressings, transportation of the sick, help in supplying equipment for the sick rooms and personal comforts to patients with cancer.

"Another aspect of the work of the American Cancer Society is the education of physicians. Studies are being made of the extent to which cancer is being taught in our medical schools. Panels are being created for graduate education of physicians throughout the country. Nineteen states have established speaker bureaus and four more are in process of formation. The American Cancer Society is developing selections of lantern slides, motion picture films and similar educational material which are available to those lecturing in the field. Plans have been made for the making of seven motion pictures in color."

California MEDICINE

OFFICIAL JOURNAL OF THE CALIFORNIA MEDICAL ASSOCIATION
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VOL. 68 JUNE, 1948 No. 6

What's New in Endocrinology

GEORGE W. THORN, M.D., *Boston*

ADVANCES in endocrinology might be considered under the following categories: (1) Discovery of new hormones; (2) modification of existing hormone preparations; (3) increased understanding of the physiological and pharmacological action of the hormones in the body; and (4) clinical uses. Regarding the latter aspect, it is important to consider that, in general, hormone preparations may be used for their therapeutic effectiveness in correcting an existing deficiency or for their pharmacological action by increasing beyond normal the level of circulating hormone. In the latter instance, it is obvious that the effectiveness of a given quantity of hormone will vary over a period of time depending upon the subsequent inhibition of the individual's own natural hormone production; whereas in the deficiency states, a given dose of hormone may be expected to provide a definite physiological action for an indefinite period of time. Finally, there is a new field developing in which nonhormonal preparations may augment or depress hormonal secretion and action within the body.

Anterior Pituitary Gland: One of the most exciting and interesting recent developments has been the clinical confirmation of the experimental observation that the anterior pituitary gland may respond to a variety of stimulating agents and in turn initiate the increased secretion of glands such as the thyroid and adrenal cortex. The preparation, within the past year, of quantities of purified pituitary adrenocorticotropic hormone (ACTH) adequate for clinical investigation represents a great step forward and follows upon the pioneer work carried out in this field by Dr. Herbert M. Evans and his group in this community. The large-scale production of this hormone has been accomplished by the Armour Laboratories, and we have had an opportunity to test this material in a variety of clinical conditions. The response of the intact adrenal gland to a single small dose of ACTH appears to provide a simple test of adrenal cortical function. It has been observed that a prompt fall in circulating eosinophils in the blood and a rise in the uric acid-creatinine ratio in the urine follow the liberation of carbohydrate regulating compounds of the adrenal cortex. The test is carried out as follows:

No food is permitted after 8:00 p.m. On the following day water is allowed ad libitum, and in addition 200 cc. of water is given at 6:00 a.m., 8:00 a.m., and 10:00 a.m. A control urine specimen is collected between 6:00 a.m. and 8:00 a.m., and an eosinophil count is done at 8:00 a.m. Immediately thereafter 25 mg. of ACTH is injected intramuscularly. Urine is collected from 9:00 a.m. to noon, and the eosinophil count is repeated at noon. The percentile decrease in circulating eosinophils is calculated, the two urine specimens are analyzed for uric acid and creatinine, and the uric acid-creatinine ratio is computed.

Studies in man indicate that this preparation of ACTH stimulates the production of adrenal cortical hormone having all of the known physiological actions of the adrenal cortex, i.e. electrolyte regulation, carbohydrate, protein, and fat regulation, androgenic function, and regulation of lymphoid tissue.

In addition, studies in our laboratory indicate that a small dose of epinephrine (0.2 mg.) infused slowly over a period of one hour is sufficient to stimulate the anterior pituitary of a normal individual to release endogenous ACTH and to result in increased adrenal hormone secretion. Failure to obtain such a response suggests anterior pituitary failure; whereas failure to obtain a response to ACTH suggests adrenal cortical failure. It is also evident that with the use of purified ACTH it may be possible to explore a wide variety of disease states for evidence of adequate adrenal cortical function and thus for the first time obtain objective evidence of relative adrenal cortical deficiency in states other than Addison's disease and chronic adrenal cortical insufficiency.

Parathyroid Glands: Treatment of acute hypoparathyroidism is best accomplished by the simultaneous administration of calcium intravenously, parathormone intramuscularly and AT-10 (Hytakerol, Winthrop). The first of these (intravenous calcium) acts

Read as a part of Panel Discussion of What's New before the general meeting at the 77th Annual Session of the California Medical Association in San Francisco, April 11-14, 1948.

immediately but persists only a few hours. The second (intramuscular parathormone) acts within an hour and may last for six to twelve hours. The vitamin-like preparation takes several days for maximum effect and is ideal for long-term management.

It is important to reiterate at this time that there is no indication that tetany due solely to hyperventilation is associated with any measurable change in ionized calcium in the blood.

Finally, it is possible that in patients with early hyperparathyroidism without renal involvement one may find a decreased response to parathormone administered intravenously. The measurement of this effect is based upon the phosphorus excretion in the urine.

Thyroid Gland: It is important to point out at this time that thiouracil in combination with iodine represents a great advance in preoperative preparation of patients with thyrotoxicosis who are to undergo surgical operation. Propyl-thiouracil (Lederle) with or without iodine may be employed as a medical treatment for thyrotoxicosis, as may radioactive iodine. It should be appreciated, however, that although excellent clinical results may be obtained in properly selected patients, both of these forms of treatment must still be considered in the experimental stage and cannot be assessed as yet for final evaluation. It therefore becomes the duty of everyone who employs such methods of treatment to make careful observations on the initial diagnosis and the course of the disease following therapy. It is obvious to all that there has been no new approach to the management and cure of thyrotoxicosis, since surgical operation, thiouracil, and radioactive iodine all attempt to control the disease by reducing the capacity of the end-organ to respond. Although great success can be claimed for such an approach, it obviously does not attack the fundamental problem of the abnormality initiating increased thyroid activity.

Thymus Gland: Evidence continues to be obtained that the removal of the thymus gland in certain patients with myasthenia gravis either modifies the progressive course of the disease or, in more favorable instances, results in a prolonged remission.

Pancreas: The usefulness of shorter acting insulins such as globin and modified protamine appears well established. It is hoped that for the sake of good patient care and protection of the physician an unlimited supply of intermediate forms of insulin will not be made available. It should be possible to regulate most diabetics with either crystalline, globin, modified protamine, or protamine insulin either singly or in combination. Recent reports on pancreatic extracts from alloxan treated animals in which presumably the beta cells of the islets have been destroyed and in which the alpha cells persist, suggest that the alpha cells may liberate a hormone with glycogenolytic properties. Certainly it is evident that total pancreatectomy in a patient with diabetes mellitus does not aggravate the diabetes appreciably.

In the management of patients with diabetic coma who are unable to take food within a relatively short period of time or who have had poor regulation of diabetes over a prolonged period, the usefulness of solutions containing potassium and phosphate is well appreciated.*

Adrenal Steroids: Methods for synthesizing 11-oxy adrenal steroids (Kendall's Compounds A and B) and 11-17-oxy steroids (Kendall's Compounds E and F) are now available. Unfortunately, the large number of chemical steps involved, the relatively low yields, and therefore the high cost of preparation have delayed the synthesis of any large quantities of these interesting hormones.

Gonads: Perhaps the most exciting and interesting recent advance in this field is the use of sex hormones in the treatment of certain forms of cancer. Castration and/or estrogen therapy have proved useful in the management of advanced prostatic cancer. Nathanson's and Adair's studies indicate the usefulness of testosterone therapy in bony metastases from breast tumors in females and the possible advantage of estrogen therapy in selected elderly women with carcinoma of the breast.

Peter Bent Brigham Hospital.

*Potassium Phosphate Solution:

K_2HPO_4 2.0 gm. } K=25 m.eq./1
KH_2PO_4 0.4 gm. } P=14 mM/1
Glucose 60.0 gm.
a.s. ad. 1000 cc. H_2O
To be infused slowly over a period of two hours.

QUESTIONS AND ANSWERS

Question: Dr. Thorn, can ovulation be produced in women by the use of endocrine substances?

Dr. Thorn: When failure of ovulation is associated with an intact ovary but deficient pituitary-gonadal stimulating hormones, it should be possible to stimulate ovulation with appropriate doses of FSH and LH.

Question: What is the status of the treatment of acromegalic gigantism with reference to estrogen therapy?

Dr. Thorn: In most instances it appears necessary to employ irradiation of the pituitary gland to control progressive development of acromegaly. Estrogenic therapy might be effective in mild cases or as an adjunct.

Question: Is testosterone indicated after surgical operation on the breast in an elderly patient?

Dr. Thorn: Testosterone therapy might be considered on one of three bases: (1) Its nitrogen-retaining effect as an aid in postoperative care; (2) replacement therapy in a patient with deficient androgens (male climacteric); and (3) its action on bony metastases. Certainly its use in conditions one and two is justified. It should be considered very much in the experimental stage in condition three.

Question: What may be considered a "subandromimetic" dose of testosterone in females with particular reference to hirsutism?

Dr. Thorn: There is, of course, wide individual variation in the response of female patients to testosterone. In general, however, 10 mg. of methyl testosterone per day by mouth for three to four months may be considered the upper limit beyond which one would very likely note secondary masculinizing characteristics.

Question: Discuss the anabolic effect of testosterone and testosterone esters.

Dr. Thorn: In my experience the chief difference is quantitative rather than qualitative, i.e. slower absorption or slower breakdown of esters results in a more prolonged androgenic effect from a given dose of hormone.

What's New in Communicable Diseases

Albert G. Bower, M.D., *Pasadena*

SLUDGED BLOOD—After 16 years of study, Knisely and his associates [17] report that in the experimental animal as well as in the human subject, the following changes are absent in health but present in disease, either induced or naturally occurring: masses of agglutinated red cells (not rouleaux) of different basic sizes and degrees of agglutination appear in the blood vessels, in one or more of the following phenomena: reduction of the rate of blood flow in all open vessels; ingestion of the agglutinated sludge by the fixed tissue, endothelial, physiological phagocytes of the spleen and liver (hemophage cells); the sedimentation and settling out of the agglutinated sludge from the circulating plasma; either temporary or permanent plugging to a varying degree of arterioles and other vessels.

The effects produced in the blood by many different systemtic diseases of different origin, and by severe injuries, were studied in nearly 600 humans. The various lenses of a binocular dissecting microscope were focused on the capiliaries of the eyelid. Every severely sick person showed visible evidence of intravascular sludged blood and abnormal changes in the vessel wall.

This poses the following questions: In the presence of severe infections, in addition to attempting to free the body from invading organisms, must we attempt to prevent blood from sludging, entirely or in part, and if so, what is the best procedure? In addition, what steps may be taken to prevent destruction of normal blood cells, preserve adequate blood volume, prevent thrombi and emboli, and keep vessel walls intact?

Brucellosis.—It has long been known that controlled high blood levels of various members of the sulfonamide drugs will cure acute brucellosis in many cases. However, most patients are treated with inadequate levels without effecting a cure. In such cases, later treatment with sulfonamides inevitably results in failure, the surviving organisms having become entirely resistant.

While streptomycin prevents the growth of the bovine, porcine, and caprine strains of Brucella [14] in vitro, and at a concentration readily achievable in human blood, it has been disappointing in the prevention or treatment of the disease in the experimental animal and in treatment in the human. The combination of sulfonamides with streptomycin in treatment appears to be successful.[10,21] From present data it appears that streptomycin should be given in 0.5 gm. doses every six hours for seven days only. Concurrently, sulfadiazine is given in an initial dose of 4 gm., to be followed by 2 gm. every four hours thereafter for at least two weeks and preferably three. Our comment is that we prefer equal parts of sulfadiazine and sulfamerazine to either drug alone, and we believe that the blood level should be maintained at 15 mg. per cent or higher and the urinary pH kept at 7.4 or higher.

Vaccination against cholera produces antibodies that give a positive agglutination against Brucella organisms.[11] This should be taken into account in doing agglutination tests.

The inability to secure positive agglutination tests in many bacteriologically proven cases of brucellosis is well known. Absent or low agglutination may be due to the presence of blocking antibodies in the patient's blood, and upon their removal either the test becomes positive or the positive titer rises. Using rabbit or bovine sera entirely to replace all saline solution as a diluent for titrations, or as a suspending medium for the bacilli, causes the disappearance of these blocking antibodies.

Spencer's Disease.—This disease is variously known as intestinal "flu," epidemic nausea and vomiting, epidemic gastro-enteritis, "virus X," and what not. It is high time the profession settled on one name so that reports from different parts of the country will be clearly understood to denote the same clinical entity. Though long known in the East, it appears to have been relatively infrequent there until the war years. In California it has been endemic, with regularly recurring epidemics, for at least 35 years. It occurs principally in children, in annual fall and winter epidemics of variable proportions. Recently the disease was produced in humans experimentally by the oral feeding of throat washings and fecal filtrates,[13] proving it to be due to a filtrable virus, at least in this one particular Eastern epidemic.

Infectious Mononucleosis.—Before 1935, this was relatively a rare disease in California. Since that time it has become increasingly common, and at present enters into the differential diagnosis of most communicable diseases and all bizarre fevers. Severe anginose types may be distinguished from pharyngeal diphtheria only by the laboratory: the patients look, smell and act as though suffering severe diphtheria. However, cultures are persistently negative, and in time the typical Downey cell lymphocytes appear and the heterophile test becomes positive. A large spleen and enlarged lymph glands are suggestive. The systemic or typhoidal type may be impossible to diagnose for several weeks, the disease meanwhile resembling bacterial endocarditis, brucellosis, typhoid malaria, Q fever, intermittent fever, and other entities. Rose spots frequently appear on the skin, and the spleen enlarges. The morphological blood picture is variable, inconsistent and confusing, and often

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many days elapse before it becomes diagnostic. This is also true of the heterophile test. Incidentally, the heterophile test should be checked by absorption against false positives if the patient has received any serum. Results of blood cultures and Widal's test are negative.

In a recent autopsy study of a patient who was accidentally killed,[1] the disease was shown to have produced lesions of a focal infiltrative type in the brain, heart, lungs, spleen, adrenals, and testes. So far as the author is aware, this is the first report of lesions in the brain, although infrequently in clinical cases a meningeal picture or a Guillain-Barre syndrome does occur. Ruptured spleen is a common concomitant of the disease. In differential diagnosis the disease is often mistaken for infectious hepatitis. Pooled human convalescent scarlet fever serum, or immune serum globulin (gamma globulin) favorably alters its clinical course.

Infectious Lymphocytosis.—This entity unquestionably occurs more frequently than it is reported. The author observed three hospital cases last year. The lymphocyte count usually varies from 40 to 95 per cent of the total leukocyte count, which runs from 40,000 to 150,000. The lymphocytes are small to intermediate in size, being predominantly mature with nuclei of coarse, dark-staining, chromatic material, and with scant basophilic cytoplasm. These cells do not resemble the characteristic cells of infectious mononucleosis, and the heterophile test remains negative. In the three cases mentioned, the patients were children under seven. Mild coryza, slight cough, and sore throat were present. The cold agglutinin test was negative.

Reiter's Disease.—While atypical cases may not be possible to diagnose accurately, this disease is a real clinical entity and, in its typical form, would be hard to mistake for anything else, once one is familiar with it. The characteristic diagnostic triad is conjunctivitis, urethritis, and arthritis. Smears and cultures are free of organisms, but despite this, in some cases the disease has been erroneously diagnosed as gonorrhea on the sole basis of (sterile) urethral discharges. In a few instances, superficial ulcerative lesions develop on the buccal mucosa of the bladder or urethra, the glans penis, and the plantar surfaces of the feet. It has been mistaken for Stevens-Johnson disease, a type of erythema multiforme with conjunctivitis and buccal mucous membrane involvement. Dunham and associates[8] succeeded in isolating a filtrable virus from the conjunctival and urethral secretions of a patient with Reiter's disease. It grew in developing chick embryos, from which it was successfully inoculated into mice, 60 per cent of which developed conjunctivitis.

Mapharsen is the drug of choice in treatment.

Poliomyelitis.—Death during the acute stage of poliomyelitis is almost entirely the result of the patient's inability, because of the structures involved in the disease, to meet the basic, physiological, respiratory requirements of the human body. Generally speaking the only patients who die are those whose respiratory apparatus is involved. Therefore, early correction of respiratory deficiencies becomes imperative. Fundamentally, the problem resolves itself into two practical components: (1) maintain an open airway to allow adequate pulmonary ventilation; (2) where the patient's gaseous interchange is cut down through mucus secretions, pulmonary edema or atelectasis, to prevent or remove secretions and supply sufficient oxygen and air, or oxygen and helium. Respiration by means of the iron lung is indicated only when ventilation is deficient, which is to say, when the respiratory center is involved, or when there is a disabling paralysis of the intercostal muscles or diaphragm. In the former case, if aberrant and irregular impulses from the respiratory center cause the patient to breathe against the respirator, so that breathing is not synchronized with the machine, one or two doses of intocostrin (curare) almost invariably produces the desired effect. If obstruction to a free airway exists, tracheotomy should be performed at once. (We prefer the low type of tracheotomy.) Suction should be used during expiration. Kubicek and associates[18] point out that an arterial oxygen tension less than 100 mm. of mercury may injure vital centers. They state that the usual determination of the percentage of oxygen saturation of the hemoglobin, such as is advocated by Comroe,[4] is a useful adjunct in determining oxygen deficiency but may lead to erroneous conclusions regarding the actual amount of oxygen received by the ultimate cell. He points out, for example, that if the oxygen saturation of hemoglobin falls to 90 per cent from the norm of 96 per cent, the partial pressure of dissolved oxygen in the plasma falls from 100 to 60 mm. of mercury, a reduction of 40 per cent in the force which moves oxygen from the plasma to the cell. He further points out that the pathologic changes of the disease, itself, interposes physical barriers to the free interchange of gases, such as perivascular cuffing, edema of the tissues, and hemorrhage. By obtaining a free airway to increase the oxygen tension within the arteries, and by the use of medicinal oxygen, one may increase the transfer of plasma oxygen to the vital nerve cell and prevent destruction.

Waiting for cyanosis to indicate lack of available oxygen may be disastrous: By the time cyanosis is visible the flow of oxygen from capillary blood plasma to nerve cells has been decreased at least 65 per cent. This explains why cyanotic patients so frequently die—anoxemia of high degree was present long before any sign of cyanosis. The symptoms of anoxia are confusing. They are headache, tachycardia, hyperpyrexia (not usual in ordinary poliomyelitis), stupor, convulsions, or delirium. In therapy, equal parts of oxygen and helium are preferred to oxygen and air or to straight oxygen.

Comroe and Bothelo made arterial punctures and determined the oxygen saturation of the blood by the method of Van Slyke and Neill, and used their results to set the oximeter accurately at a known value.[4] Under such conditions the oximeter becomes

a reliable instrument and may be of greatest assistance in indicating the proper time to perform a tracheotomy.

Baker[2] believes that increase in pressure in the bronchial tree is of value in patients tending to develop pulmonary edema, and that fluids should be restricted to meet the requirements of the case.

If one is to judge from the clinical and laboratory findings as to the surviving patients, the strain of infecting virus in Southern California would appear to have changed with the epidemic of 1942, since the morbidity rate has been lower, the mortality rate higher, and the manifestations of the disease much more like those seen in the eastern United States than was previously the case. Over 400 cases occurred in Los Angeles County in 1947 and over 1,600 the year before. In previous years the situation in 1947 would have been deemed an epidemic.

Patients with no involvement of the respiratory apparatus are treated with hot blanket packs: The prone pack, the additional pack, or the full Kenny pack, according to the need of the individual. All these procedures have their usefulness in affording mental and physical relief to the patient. Physical therapeutic procedures aimed at the economic rehabilitation of the patient are started as soon as he is able to stand the necessary physical exertion.

Q Fever.—The disease is caused by Rickettsia Burneti, first described by Burnet and Freeman,[3] and it gets the name from the question marks they made in their note books while studying it, not from Queensland as is so often said. An organism isolated in this country by Cox[5] in 1940 has been found to be identical with R. Burneti. Unlike most rickettsia bodies, it is both intracellular and extracellular in tissues and exudates. It may be grown in developing chick embryos. Blood tests would indicate that many cattle workers in the western states have had the disease at some time in the past, and that it is an old disease, new only, in its recognition. Los Angeles County has had several hundred cases since 1946, although the diagnosis in some cases listed in 1946 was made only in retrospect and in the light of experience with new cases in 1947. The preliminary report emanating from the Public Health Service[16] shows that in Southern California most cases have been in dairy workers or those who lived around dairies. The organism was recovered from the milk of many widely separated dairies. No diminution in the quality or quantity of milk was noted; no demonstrable illness was found in any of the cattle of these dairies: local infection of the teats or udders without general symptoms is suspected in cows; no insect vector has been found.

Except in unusual circumstances, it is rarely possible to make a diagnosis of Q fever either early or during the clinical course of the disease. In retrospect, overlooked infections and incorrect diagnoses have been common. Patients acutely affected may have high fever, gross rales in the chest, blood-streaked sputum, mental confusion, meningism, pleural effusion, and moderate elevation of the blood sedimentation rate. Complement fixation or agglutination tests are rarely positive before the end of the second week or later. In a late stage of the disease, the blood may present the typical Downey-cell lymphocyte seen in infectious mononucleosis, but the heterophile remains negative.

After vague malaise, the onset is generally abrupt and the symptoms may be either of two types: (1) retro-orbital pain on ocular movements, accompanied by chills, chilly sensation, headache, and continuous or intermittent fever ranging from 100.5° to 106° F. Respirations usually remain under 30, the pulse is disproportionately slow for the fever, and cough sets in. (2) Onset is with conjunctivitis and rhinitis, after which it follows much the same course as the other. Differential diagnosis for the most part is entirely a laboratory procedure, and the diseases requiring consideration are, among others, primary atypical pneumonia, infectious mononucleosis, bronchopneumonia, rarely lobar pneumonia, influenza, psittacosis, dengue, brucellosis, typhoid, typhus, systemic tularemia, and pulmonary tuberculosis. In about 20 per cent of the cases a punctate rash appears near the end of the second week. It is ephemeral and not diagnostic, but has been known to last 72 hours, appearing first on the back, then the chest and abdomen. In over half the cases the chest involvement would be entirely missed unless chest roentgenograms were taken, and in this respect it closely resembles primary atypical pneumonia, the disease for which it is most often mistaken.

Rabies.—Recently for the first time a suspicion of rabies in a human was confirmed by injecting the patient's saliva into white mice.[7] Later, Negri bodies were seen in the brains of the animals when they were sacrificed after having contracted the disease.

Leprosy.—In view of many reported failures to induce leprosy by experimental inoculation through the years, the recently reported development of leprosy in designs tattooed on the arms of two Marines is noteworthy.[19] Both were tattooed at the same place in Melbourne, Australia, in June, 1943. Early in 1946 lesions developed in these tattooed areas, but not in those made at other times and places, and Hansen's bacilli were found present at the National Leprosarium in Carville, Louisiana. Cases of apparent accidental inoculation producing leprosy have appeared from time to time in the literature, however, and we have a case to add to this list. A Los Angeles high school boy worked in a stone quarry where many Mexicans were employed. These laborers habitually defecated on the floor of the quarry. (None of them, however, is known to have had leprosy.) One day a premature blast blew many fine particles of stone from the quarry into the skin of this lad's face. Two years later, granulomatous lesions developed around a number of these stony inclusions, and from them leprosy bacilli in typical arrangement were recovered.

Until recently, the treatment of leprosy consisted of providing good hygiene, plenty of rest, and a balanced diet: in short, the same treatment as that of uncomplicated pulmonary tuberculosis. Drugs were tried and found wanting. However, with the

advent of the newer sulfone drugs, new hope of arresting the disease is held out to lepers. Promin, diasone, and promizole have all produced sustained objective improvement in the lesions of leprosy.[12] Improvement has been slowly attained, but steady in progress. So far, promin seems to be the drug of choice.

Meningitis.—In the clinical teaching centers of the world, the approach to the diagnosis and treatment of the bacterial meningitides by different clinicians has been pretty much the same in principle, varying only in application according to individual thinking and experience, as to the number and site of spinal punctures done, the combination of chemotherapeutic agents with antibiotic drugs, etc. We believe that few experienced clinicians will be able to agree with the recommendations of Hoyne and Brown[15] in their analysis of 727 cases of meningococcal meningitis. They recommend that spinal puncture be done for diagnosis only, and in some instances even omitted for that; that penicillin be omitted in treatment as an unnecessary adjunct; that in treatment sulfathiazole is the drug of choice; and that the emphasis placed upon obtaining sulfonamide blood levels is unnecessary. Consensus in a voluminous world-wide medical literature is not in accord with these recommendations and findings: There is altogether too much evidence to the contrary. Sulfadiazine, or equal parts of sulfadiazine and sulfamerazine (which we have used in several hundred cases of meningitis of varying origin) have been shown to produce far fewer and less serious side-effects than sulfathiazole, and to be at least as effective therapeutically. In the various types of severe meningitis, the practice of doing lumbar punctures at four-day intervals, for eight to sixteen days after the cessation of active treatment, has often enabled us to forestall severe relapses. When the leukocytes in spinal fluid have been steadily diminishing, and follow-up punctures show a sudden or marked rise in the white cells in the spinal fluid, almost invariably a relapse is present; any other signs or symptoms may remain inevident for one or two days. We accept this, unless some reason is otherwise apparent to account for it, as an indication for the prompt resumption of therapy. It has been a particularly valuable procedure in the care of influenza-B meningitis cases, but at one time or another has been helpful in all types. Among the smooth strains of Haemophilus influenzae, six have been isolated. However, in over 90 per cent of the cases of influenzal meningitis, strain B is the cause. In this type Alexander's serum, sulfonamides, and streptomycin are all of value and we give them concurrently. In types other than B, the serum is omitted. If resistance develops to streptomycin, some strains are quite susceptible to penicillin as second choice.

Tuberculous Meningitis.—In cases of miliary tuberculosis with concurrent meningitis, or of uncomplicated tuberculous meningitis, streptomycin at times affords almost miraculous arrest, at other times total failure. The dosage has not been uniformly established, and reports almost too numerous to mention are appearing in current literature. We are finding that the proper dose has to be individualized to meet the needs in a given case, with procedures changed to meet requirements. When a relapse follows discontinuance of streptomycin treatment, resumption of therapy has often failed, due to the streptomycin-fastness acquired by the surviving organisms. That this is not always true is proven in the case of a patient at present undergoing treatment on our service. The patient, a three year old child, underwent 12 weeks of streptomycin treatment for miliary tuberculosis. The disease was arrested and the treatment stopped in May, 1947. Three months ago the patient was readmitted to the hospital with proven tuberculous meningitis, and streptomycin was given intrathecally and intramuscularly. Response was immediate, and at present, although treatment continues, the child appears perfectly well.

While dosage is varied to fit the requirements of age, sex, therapeutic response, tolerance to the drug, etc., the basic plan of streptomycin therapy for tuberculous meningitis, with or without miliary involvement, is to give 0.125 to 0.250 gm. intramuscularly every six hours, and 0.05 to 0.1 gm. intrathecally daily for six weeks. After that, treatment may be altered to fit requirements, but in any event usually continues at least three months.[6] If the same area of the spine is repeatedly and consistently used in doing daily lumbar punctures, the drug ultimately produces a yellow pigment in the spinal fluid. This pigment remains unidentified. Alternating cisternal with lumbar puncture will usually prevent its appearance. After six weeks, taps are only done two or three times weekly. From the treatment outlined, so far we have seen very few toxic reactions, none of them irreversible. Results have been as good as those obtained when larger doses were employed. With larger doses toxic manifestations appear in direct proportion to their increased size and the length of time they are used, and any deafness caused is permanent.

Chemotherapy and the Antibiotics.—In many infections formerly incurable, the outlook has been entirely changed through the proper selection and application of chemical and antibiotic agents to the treatment of them. The duration of many other diseases, and the rate of mortality from them, have been substantially reduced. Where the agents have been found effective, formerly useful procedures either have been altered or abandoned in nearly every instance. Although a detailed discussion of these remarkable drugs is not possible in this short presentation, a few things should be mentioned in passing. There is increasing evidence of many types that the pH of the urine should be maintained at 7.4 or higher when large doses of sulfonamides are used in the treatment of systemic infections, and that sodium bicarbonate should be replaced by the lactate or the citrates for this purpose. From the standpoint of preventing untoward side-effects, the use of two or more sulfonamide drugs in proper proportion appears to be an improvement over using any one of them alone, and therapeutically at least as efficacious. For the past 18 months we have been using equal

parts of sulfamerazine and sulfadiazine. This combination has been very effective therapeutically, and has produced far fewer disagreeable or dangerous side-effects than we have previously experienced in the use of sulfonamide preparations.

Eagle[9] has shown that a paradoxical reaction may appear in a certain number of strains of streptococci and staphylococci when the amount of penicillin in the blood is raised above the optimum level for their destruction. In other words, if penicillin is given in some of these infections beyond an optimum dosage, the procedure not only wastes the drug but causes failure to destroy the organisms. When possible, dosage should be calculated upon sensitivity ascertained in vitro.

Some chemicals have the property of preventing excretion of penicillin through the renal tubules,[20] thus producing very high blood levels though actually less penicillin has been given. This may be of value when inordinately high blood levels must be maintained, but none of the chemicals so far tested is fool-proof. Of those tested so far, caronamide seems to be the best, but it must be very carefully watched, for it invariably produces a reducing substance in the urine, believed to be a metabolite of the drug itself, as well as albumin, casts and red blood cells. These usually clear up in a few days after the drug is stopped.

Hyaluronidase, an enzyme, has become widely used as a rapid spreader through the tissues of fluids and sulfonamides. It overcomes the blocking effect of hyaluronic acid and allows rapid diffusion by increasing the permeability of the body's mucoid and connective tissues.

Para-aminobenzoic acid (usually abbreviated to P.A.B.A.) has become the drug of choice in treating the rickettsial diseases. The exception is Q fever, in which streptomycin is indicated. The dose of P.A.B.A. is 2 gm. every two hours. The patient should be alkalinized and the blood watched for any developing neutropenia.

The predicted threat of major introductions of tropical diseases into this country by returned service men has not materialized. However, in closing, it might be well to invite attention to the fact that in the past year cases of schistosomiasis, leishmaniasis, balantidium coli dysentery, fasceolopsis buski infestation, and Madura foot, among others, have been seen in this country.

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REFERENCES

1. Allen, F. H., and Kellner, A.: Infectious mononucleosis: An autopsy report, Am. J. Path., 23:463, 1947.

2. Baker, A. B.: Bulbar poliomyelitis: Diagnosis and treatment, Ill. Med. Jour., 92:160, 1947.

3. Burnet, F. M., and Freeman, M.: Experimental studies on the virus of "Q" fever, Med. J. Australia, 2:299, 1937.

4. Comroe, J. H., Jr., and Bothelo, S.: The unreliability of cyanosis in the recognition of arterial anoxemia, A. J. Med. Sci., 214:1, 1947.

5. Cox, H. R.: Rickettsia diaporica and American "Q" fever, A. J. Trop. Med., 20:463, 1940.

6. Current Comment: Dosage of streptomycin in tuberculosis, J.A.M.A., 135:842, 1947.

7. Duffy, C. E., Wolley, P. V., Jr., and Nolting, W. S.: Rabies (a case report with notes on the isolation of the virus from saliva), J. Pediat., 31:440, 1947.

8. Dunham, J., Rock, J., and Belt, E.: Isolation of filterable agent pathogenic for mice from a case of Reiter's disease. J. of Urol., 58:212, 1947.

9. Eagle, Harry: A paradoxical zone phenomenon in the bacterial action of penicillin in vitro, Science, 107:44, 1948.

10. Eisele, C. W., and McCullough, N. B.: Combined streptomycin and sulfadiazine treatment in Brucellosis, J.A.M.A., 135:1053, 1947.

11. Eisele, C. W., McCullough, N. B., and Beal, G. A.: Brucella agglutination tests and vaccination against cholera, J.A.M.A., 135:983, 1947.

12. Faget, G. H., and Erickson, Paul T.: Chemotherapy of leprosy, J.A.M.A., 136:451, 1948.

13. Gordon, I., Ingraham, H. S., and Korns, R. F.: Transmission of epidemic gastroenteritis to human volunteers by oral administration of fecal infiltrates, J. Exp. Med., 86:409, 1947.

14. Hall, W. H., and Spink, W. W.: In vitro sensitivity of Brucella to streptomycin, etc., Proc. Soc. Exper. Biol. & Med., 64:403, 1947.

15. Hoyne, A. L., and Brown, R. W.: 727 meningococcic cases: An analysis, An. Int. Med., 38:248, 1948.

16. Huebner, R. J., Jellison, W. L., Beck, M. D., Parker, R. R., and Shephard, C. C.: Q fever studies in Southern California, Pub. Health Reports, 63:214, 1948.

17. Knisely, M. H., Bloch, Eliot, T. S., and Warner, Louise: Sludged blood, Science, 106:431, 1947.

18. Kubicek, W. G., Holt, G. W., and Kottkey, F. J.: Physiology of respiration as applied to the treatment of bulbar poliomyelitis, 29:84, 1948.

19. Porritt, R. J., and Olsen, R. E.: Two simultaneous cases of leprosy developing in tattoos, Am. J. Path., 23:805, 1947.

20. Shaw, C. C., Boger, W. P., et al.: Enhancement of penicillin in blood levels in man by means of a new compound, Caronamide, A. J. Med., 3:206, 1947.

21. Spink, W. W., Hall, W. H., Shaffer, J. M., and Braude, A. I.: Human Brucellosis, its treatment with a combination of streptomycin and sulfadiazine, J.A.M.A., 136:382, 1948.

QUESTIONS AND ANSWERS

Dr. Cline: Dr. Bower, would you advise hospitalization of a patient with brucellosis previously inadequately treated with sulfa drugs, and the institution of treatment with sulfadiazine-sulfamerazine combined with penicillin or streptomycin?

Dr. Bower: Each case must be considered individually on its merits and a general answer cannot be given. We recently treated a 10 year old boy in whom the disease was proven, with sulfadiazine-sulfamerazine for three weeks, during the first eight days of which he received 0.5 gm. of streptomycin every six hours. For five years he had had fever daily, ranging from 99.6 to 102 F., and last year was inadequately treated with sulfadiazine alone. He has now remained completely well for over three months following the therapy. Penicillin is of no value in the treatment of brucellosis.

One should be sure of the diagnosis before resorting to such a strenuous regimen, and brucellosis may be one of the hardest of all diagnoses to make in the field of infectious medicine. The drug therapy outlined, powerful drugs are used, requiring that careful safeguards be set up for the patient. They are not fool-proof and are capable of causing great harm to the patient if not carefully watched. Also the treatment may have to be changed to meet changing requirements.

Recent Developments in Treatment of Pulmonary Diseases

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ONE of the most important advances in chest diseases in recent years has been the advent of streptomycin in the treatment of pulmonary tuberculosis. Although its discovery was announced only four years ago, experience with over one thousand patients in Army, Navy, Veterans, and civilian hospitals has clearly demonstrated that streptomycin alters the course of tuberculous infections in a manner unapproached by earlier chemotherapeutic agents.[3,7]

Exudative infiltrations of recent origin represent the type of pulmonary lesion most favorably influenced by streptomycin. At this stage vascularity remains little impaired, and there is good penetration of the antibiotic throughout the involved tissues. The most dramatic results are observed in miliary tuberculosis, in which there is frequently complete roentgenologic clearing of the pulmonary infiltrations. Relapses unfortunately occur in the majority of such patients, and a second course of treatment is ineffective because of the appearance of resistant organisms. Another reason for the poor results obtained in miliary tuberculosis is the high incidence of tuberculous meningitis, which may be present when treatment is started, or may develop two or three months later. With tuberculous meningitis the initial response to treatment is also usually good, but later the signs and symptoms recur and death results within a few weeks. Only about 15 per cent of patients with tuberculous meningitis have remained symptom free for as long as a year following therapy with streptomycin.

Because of the development of resistant organisms, and the toxic potentialities of the drug, it is generally felt that streptomycin is not indicated at present in the treatment of patients with minimal and moderately advanced pulmonary tuberculosis, since in these stages the response to bed rest and collapse therapy is usually favorable. Streptomycin is also contraindicated in chronic fibroid or fibrocaseous tuberculosis, in which anatomical barriers prevent adequate contact between the infecting organisms and the antimicrobial agent. There may be regression of the infiltration surrounding long-standing fibrocaseous involvement, but improvement is usually slight and temporary. Tuberculous empyema is not benefited by streptomycin.

Streptomycin also seems to be of value when used in conjunction with the surgical treatment of tuberculosis, especially resection. In the recent series of Clagett,[2] streptomycin appeared to prevent early postoperative spreads following lobectomy and pneumonectomy. Late spreads, however, were not prevented. The role of resection in the treatment of pulmonary tuberculosis is not finally established, but preliminary experience indicates that streptomycin will prevent at least some of its hazardous complications. Streptomycin may also be used in conjunction with thoracoplasty, to prepare the patient for operation, and for the treatment of postoperative spreads. Other surgical procedures, such as extrapleural pneumonolysis, are being re-evaluated in the hope that streptomycin will decrease complications.

A disturbance of function of the inner ear is the chief toxic manifestation caused by streptomycin. This occurs in virtually every patient who receives daily doses of 2 gm. or more for three or four weeks, and causes unsteadiness and dizziness, which is usually mild, but may be incapacitating. The damage to the vestibular apparatus is apparently permanent, but except in elderly individuals compensatory mechanisms are so effective that the disability is not noticed after a few weeks. Sensitivity reactions, chiefly fever, rashes, and eosinophilia, are common but usually of no consequence. Other serious toxic manifestations such as deafness, renal damage, exfoliative dermatitis, and agranulocytosis, are fortunately rare. Aside from toxicity, the main limitation to streptomycin therapy is the development of resistant organisms. The majority of patients treated with daily doses of 2 gm. or more of the antibiotic have developed highly resistant organisms within three or four months, and sometimes as early as the sixth or eighth week. Clinical experience has demonstrated that when resistant tubercule bacilli appear in the test tube, the patient no longer responds to the action of the drug.

Following empirical trials with 2 or 3 gm., it has been found that equally good results are obtained in pulmonary tuberculosis with 1 gm. daily, or less, given in two or three divided doses. Recent evidence indicates that these smaller doses are associated with decreased toxicity and with a lower incidence of development of resistant organisms.

OTHER PULMONARY INFECTIONS

Streptomycin is also remarkably effective in the treatment of a variety of non-tuberculous pulmonary infections. Pleuropulmonary tularemia is perhaps the most noteworthy example. Morgan[8] reports gratifying results in 27 patients, and emphasizes the value of early diagnosis and treatment. Since the diagnosis is often made by a rising agglutinin titer during the second or third week of illness, early treatment on the basis of the clinical picture is advised in regions where tularemia is endemic.

Friedlander's pneumonia also responds well to streptomycin therapy. Here again treatment must be started early, because of the tendency of this infection to cause extensive tissue destruction and abscess formation. Hemophilus influenza pulmonary

Read as a part of the Panel Discussion of What's New before the general meeting at the 77th Annual Session of the California Medical Association in San Francisco, April 11-14, 1948.

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infections should be treated with both streptomycin and sulfadiazine; striking results have been obtained in the relatively small number of cases so far reported. Pasteurella pestis is highly susceptible to streptomycin, and the recently published animal experiments of Meyer and his associates at the University of California suggest that its use will markedly decrease the mortality from pneumonic plague.[10] Brainerd[1] of San Francisco has found in a small number of cases that streptomycin appears to be at least as effective as hyperimmune serum in the treatment of severe whooping cough.

The response obtained in these infections, caused by Gram negative organisms, makes a prompt and precise bacteriological diagnosis more imperative than ever before. Identification takes two or three days, so that when there is any doubt, as for example when direct smears of the sputum show a predominance of Gram negative organisms, sulfadiazine or streptomycin should be administered from the outset. If the drug is given in doses of 1 to 2 gm. daily for only a few days, the toxicity of streptomycin is negligible, and it can be promptly discontinued if the infection is found to be caused by organisms more susceptible to penicillin.

The role of penicillin in the treatment of pulmonary infections is now so well established that it need be mentioned only briefly. The treatment of pneumococcic and other bacterial pneumonias, with or without empyema, has been revolutionized by the advent of this virtually nontoxic agent. Curiously, one virus infection of the respiratory tract, psittacosis, is suspectible to penicillin. Brainerd[1] has treated eight patients with psittacosis, mostly acquired as laboratory infections, and reports prompt subjective and objective improvement, with complete clearing of the pulmonary infiltrations within a few weeks. The majority of lung abscesses can now be cured by medical means alone, and in the chronic cases requiring surgical drainage or resection, the administration of penicillin greatly reduces postoperative complications. In bronchiectasis penicillin is of invaluable aid in treating intercurrent pneumonias, in enabling otherwise incapacitated individuals to gain weight and return to work, and in the pre- and postoperative management of cases suitable for lobectomy or pneumonectomy. The safety with which all surgical operations in the chest can be undertaken has been greatly enhanced by the newer antimicrobial agents, and especially penicillin.

LUNG TUMORS

Increased interest is being shown in the diagnosis and treatment of lung tumors, especially carcinoma of the lung. Formerly considered a rare malignancy with a hopeless prognosis, this tumor is now known to make up about 10 per cent of all carcinomas. Efforts toward early diagnosis and treatment have yielded encouraging results.

Approximately 80 per cent of carcinomas of the lung occur in men over 40 years of age. In this age group cough, chest pain, hemoptysis, persistent respiratory infections, or abnormal densities on the chest x-ray, should be regarded as manifestations of carcinoma of the lung until proved otherwise. The diagnosis can be established in less than half the cases by bronchoscopy and biopsy. Examination of sputum or bronchial secretions for tumor cells, stained by the Papanicolaou method, represents an important new aid in this respect, for its use permits a definite cytologic diagnosis in over 80 per cent of cases.[5,6] An added advantage of the smear examination is that slides can be prepared by local physicians in outlying communities and sent to centers where there are specialists in cellular morphology. Such a center has been established at the University of California.

The treatment of carcinoma of the lung is resection, usually pneumonectomy. Recent advances in anesthesiology and surgical technic, as well as the advent of the antibiotics, have greatly decreased the operative hazards. In Ochsner's recently published series the surgical mortality for carcinoma of the lung was 46.4 per cent prior to 1942, and only 19.3 per cent since then.[9] Of the patients who underwent resection over five years ago, 23.3 per cent are still alive. Thus, although many patients with carcinoma of the lung are seen after the tumor has reached an inoperable stage, the outlook is much more hopeful in cases in which the diagnosis is made early.

Exploratory thoracotomy, which in skilled hands is now felt to be no more dangerous than exploratory laparotomy, is being resorted to with increasing frequency in the management of mediastinal and parenchymal shadows of unknown cause. Davis, for example, recently did exploratory thoracotomies in 40 patients to find the cause of silent spherical shadows, and found that in 70 per cent of the cases they were caused by malignant tumors.[4] Mediastinal enlargements, when bilateral, may be observed during an initial period of radiation therapy if the clinical picture is suggestive of a lymphoma. If the enlargement is unilateral, thoracotomy is usually indicated without delay if an infectious process can be ruled out and the results of other diagnostic procedures are negative. Angiocardiography is most helpful in ruling out aneurysms and other vascular abnormalities. Keen clinical judgment is needed, but most authorities are now agreed that an aggressive policy toward exploratory thoracotomy is one of the chief methods of decreasing the mortality rate from pulmonary neoplasms.

SUMMARY

Streptomycin and other antimicrobial agents have revolutionized the treatment of pulmonary infections, including tuberculosis, and have greatly decreased the hazards of surgical operations on the chest. Notable advances have also been made in the diagnosis and treatment of lung tumors.

REFERENCES

1. Brainerd, H.: Personal communication.

2. Clagett, O. T., and Seybold, W. D.: Resection in pulmonary tuberculosis, Proc. Staff Meet., Mayo Clin., 23:81, 1948.

3. Council on pharmacy and chemistry, the effects of streptomycin on tuberculosis in man, J.A.M.A., 135:634 (Nov. 8), 1947.

4. Davis, E., cited by Meade, R. H., Jr.: Am. Rev. Tuberc., 57:19, 1948.

5. Farber, S. M., Benioff, M. A., and Tobias, G.: Primary carcinoma of the lung, diagnosis by cytological studies of sputum and bronchial secretions, in press.

6. Herbut, P. A., and Clerf, L. H.: Bronchogenic carcinoma: Diagnosis by cytologic study of bronchoscopically removed secretions, J.A.M.A., 130:1006 (Apr. 13), 1946.

7. Hinshaw, H. C.: Annual report on streptomycin, J.A.M.A., 135:641 (Nov. 8), 1947.

8. Morgan, H. J.: Pleuropulmonary tularemia, Ann. Int. Med., 27:519, 1947.

9. Ochsner, A., De Bakey, M., and Dixon, J. L.: Primary cancer of the lung, J.A.M.A., 135:321 (Oct. 11), 1947.

10. Quan, S. F., Foster, L. E., Larsen, A., and Meyer, K. F.: Streptomycin in experimental plague, Proc. Soc. Exper. Biol. and Med., 66:528, 1947.

The Surgical Treatment of Cancer

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Surgical treatment offers the only hope of cure for most malignant tumors. It can be effectively combined with roentgen and radium therapy in organs such as the thyroid or uterus. Complete extirpation of the malignant process will result in cure. Unfortunately, good results follow operation only when the malignant lesion is confined to its primary site, while too often patients are submitted to operation at a stage in the disease when local extension, regional node involvement and distant metastases are already present. The percentage of so-called five-year cures is reduced to a low figure when extension has occurred, although palliative benefits in the form of increased comfort and possible prolongation of life may be obtained.

Progress continues to be made year by year in technical procedures for the removal of malignant tumors, and new fields of surgery have been developed in recent years which permit the removal of cancer in locations difficult of access. Improved methods, new operative procedures, better preparation of patients for operation, widespread use of blood, transfusions, improved anesthesia and the use of antibiotics all have aided in the reduction of mortality following the extensive operative procedures necessary for the removal of malignant growths. Further technical improvements will continue to be made year by year, yet they have not appreciably changed the curability rate of malignancies such as those occurring in the esophagus, stomach or lung.

In order to improve the results of surgery in cancer we must look to some other means than possible technical improvements in operations. Since the surgical results are dependent upon the stage to which the malignancy has developed, it is essential that the major effort be directed toward earlier diagnosis at a time when the malignancy is confined to its primary site. This attack on the cancer problem has taken several directions, most of which have been helpful. Education of the public has now been conducted for many years, yet in recent surveys of large groups of patients with cancer, the delay of the patient in seeking medical advice after being aware of symptoms was shown to be still several months. A continuation of this program of lay education is necessary and essential for earlier diagnosis.

The delay in patients reaching operation is not entirely the fault of the patient and a real responsibility for it must be accepted by us as physicians. Due to inadequate or incomplete examination, a correct diagnosis in many cases is arrived at only weeks or months after the patient first consults his physician with definite symptoms suggesting the possibility of malignancy. An attempt is being made this year under the auspices of the American Cancer Society, American College of Surgeons and state medical societies to establish cancer detection centers for the examination of patients without symptoms to try to get earlier diagnoses. Experiences so far with cancer detection centers have not been encouraging. Few patients with cancer will be discovered by this means, a large expense is involved and it seems wiser that these examinations be done by the individual physician in the course of a general examination for the discovery of any disease as well as cancer. "Pilot" cancer detection centers in order to determine just what is necessary for an examination for the detection of a malignancy can be useful, since by this

Read as a part of the Panel Discussion of What's New before the general meeting at the 77th Annual Session of the California Medical Association in San Francisco, April 11-14, 1948.

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means clinical data can be accumulated and made available for all physicians. A cancer clinic in a general hospital for the examination of patients with symptoms which may indicate the presence of cancer is an entirely different matter. Such clinics have been very effective in establishing the early diagnosis of cancer.

The most important approach to this problem is one in which the premalignant stages of the disease are sought. A number of serious malignancies have a recognizable premalignant stage, such as leukoplakia of the mouth, ulcers of the lip, nodules of the breast and polyps of the rectum. The surgeon should have a much greater sense of achievement in removal of an early premalignant lesion than in the radical extirpation of a large malignant growth.

In a consideration of what is new in the surgical treatment of cancer, new procedures have been advanced some of which have had sufficient trial to permit judging the results. Some that have been proposed and tried within the past year must await a longer period of evaluation.

CARCINOMA OF THE THYROID

Most malignancy of the thyroid arises in a preexisting fetal adenoma. Of these, 3 to 10 per cent are malignant at the time they are removed. At the time of removal of the discrete tumors, if there are any signs of extension or adherence, immediate frozen section should be done and, if malignancy is found, a total lobectomy or total thyroidectomy done. If this procedure is combined with postoperative radiation therapy, approximately 80 per cent will remain free of the disease. When carcinoma of the thyroid involves most of the gland, total thyroidectomy followed by postoperative roentgen therapy results in "cure" in 17 to 60 per cent, depending upon the type of malignancy present. When papillary tumors are present, total lobectomy with radical neck dissection, again combined with roentgen therapy, gives very satisfactory results. This is one field where surgical treatment of premalignant lesions and of early malignancy has been most encouraging.

CARCINOMA OF THE ESOPHAGUS

In recent years resection of the esophagus with restoration of continuity by anastomosis of the upper esophagus to a tube of stomach or jejunum has been proved technically feasible, with 30 to 60 per cent of carcinomas of the esophagus being resectable. Within the last year Sweet has described an operative procedure for resection of the upper third of the esophagus with anastomosis of a stomach tube in front of the arch of the aorta to the upper esophagus, which is an important advance. Resections of the middle third and lower third of the esophagus have now been performed in a large group of patients. It is impossible at present to judge the effectiveness of this procedure so far as the five-year results go, but the surgical mortality has been decreased year by year until this operation can be done with a mortality of 10 to 15 per cent. The immediate results of operation have been quite satisfactory, with the relief of symptoms.

CARCINOMA OF THE STOMACH

Few improvements have been made in the treatment of cancer of the stomach and the results following gastrectomy continue to be discouraging. Thirty to 45 per cent of these lesions are resectable, yet of those resected, only approximately 12 per cent have resulted in five-year survival. Improvement in the results following operation for cancer of the stomach will be accomplished only if early roentgenographic visualization of the stomach is done in any patient with persisting digestive symptoms. It is quite possible that certain technical improvements can be made from a surgical point of view. Ogilvie proposed the removal of all of the omentum with the stomach in an attempt to remove early serosal metastases, and this has now been accepted as a routine procedure. An increasing number of total gastrectomies have been performed for advanced malignancy of the stomach and it is quite possible that if the number of total gastrectomies be increased with removal of the spleen and careful removal of the gastrohepatic omentum and celiac nodes, the surgical results can be further improved.

CARCINOMA OF THE PANCREAS

In another group of malignancies, those in the region of the pancreas and duodenum, recently there has been successful removal. Through the influence of Whipple, an increasing number of patients with lesions in this location have survived radical pancreatoduodenectomy. Carcinomas of the ampulla of Vater fortunately are slow growing and tend to remain local and produce early symptoms of obstructive jaundice. Radical removal can be accomplished in these cases not only with reasonable expectation of cure but with normal restoration of liver, pancreatic and digestive functions. In this field, as in that of carcinoma of the esophagus, further time is necessary to evaluate the results. The authors can report 54 patients who have been submitted to pancreatoduodenal resection, with ten deaths and with two five-year survivals. A number of other patients are living one, two, three and four years.

CARCINOMA OF THE COLON

The surgical treatment of carcinoma of the colon continues to give the best results achieved in any type of intra-abdominal malignancy. A high percentage of patients, from 70 to 90 per cent, can be submitted to resection, with a five-year curability of over 50 per cent. With improvement in the preparation of the patient and with the use of antibiotics, primary resection with anastomosis can be accomplished in these cases with relative safety and a surgical mortality of approximately 5 per cent.

CARCINOMA OF THE RECTUM

Although carcinoma of the rectum is readily discoverable by digital or sigmoidoscopic examinations, patients with this disease continue to come to opera-

tion with the growth at a late stage. In our experience, only 40 per cent of such tumors are still confined to the primary site without spread at the time of operation, yet 90 per cent can be submitted to resection. More and more patients of an advanced age group are being encountered with this lesion. With all of the adjuvants to surgery and for the preparation of the patient for operation, recent advances have permitted the successful surgical extirpation of these lesions at an advanced age. In recent years, anterior resection of low rectosigmoid lesions and high rectal lesions with primary anastomosis has been successfully accomplished, but the effectiveness of this more local operation with restoration of intestinal continuity cannot yet be considered established. Likewise, a second operation with restoration of continuity, the "pull through" operation, has had an extended trial, but adequate five-year follow-up studies of cases following this procedure are not available. The abdominoperineal resection in one stage with abdominal colostomy still remains the generally accepted procedure for this lesion and is the procedure adopted in 98 per cent of the rectal carcinomas submitted to resection in our clinic.

During the past year Brunschwig has proposed radical removal of the pelvic organs, including the ureters, bladder, uterus, vagina and rectum, for extensive malignancy of the cervix and uterus where other surgical or radiation therapy has failed to arrest malignancy in this area. This involves bilateral transplantation of the ureters and sigmoidal colostomy. An evaluation of this procedure is impossible at present and while it has been demonstrated to be technically feasible with the use of rather heroic measures such as massive blood transfusions, a follow-up of these cases will be necessary to determine whether such an extensive procedure is worth while.

Other extensive procedures for carcinoma with local and extensive spread have been carried out in large numbers for palliation. While the operative mortality may be appreciably higher, many of these patients have greatly increased comfort; and if survival with comfort for a year or more can be accomplished, it must be, indeed, worth while.

Procedures for the relief of pain in inoperable malignancy, such as subarachnoid alcohol injection, rhizotomy and cordotomy, continue to be helpful. A recent development in this field has been the employment of prefrontal lobotomy by Poppen in 30 cases, with an encouraging relief of symptoms in most cases. Employment of this procedure, which has been used extensively for serious mental disease, must still be considered as a possible aid in this situation, but further observations for a longer period of time are necessary to evaluate the results.

In the surgical treatment of cancer we must make certain that new procedures that are advanced for the cure of cancer are consistent with the established facts relative to the growth and spread of the malignant processes in the various sites. When blood vessel invasion is present in the tumor or its environs, the possibility of cure is greatly reduced. We must remember that a block dissection, including the regional lymph nodes, must be done; if the curability of cancer by surgical means is to be improved, a wide area of removal is necessary. Any procedure which becomes less radical and is not based on this knowledge will decrease the satisfactory results.

SUMMARY

In the light of our present knowledge, surgical treatment still is the only effective means for cure in many cases of malignant tumors. Operative procedures have been improved and standardized, and can without doubt be further improved, yet they will offer little chance for cure if the growth has spread or metastasized. The improvement in surgical results must be dependent upon earlier diagnosis and the treatment of the premalignant lesion, as well as improvement in surgical techniques.

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What's New in Gastroenterology

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STOMATITIS

A DISTINCT advance in the diagnosis and treatment of stomatitis is the replacement of the old classification of diseases of the mouth based on the appearance of the lesions, by a classification based on etiology. This has been a tardy change. The terms catarrhal, apthous, vesicular, bullous, ulcerative, membranous, and gangrenous, often represent stages in the evolution of lesions of common origin; and while the terms may be picturesque, they should be abandoned. Although the exact cause of certain forms of stomatitis remains obscure (making their management difficult), most of them can now be attributed to toxic agents, specific bacterial infection, virus infection, fungus infection, systemic disease such as leukemia or granulocytopenia, allergy, or to deficient nutrition stemming from a lack of vitamin C, thiamine chloride, riboflavin, folic acid, a liver factor, or a combination of these vitamins.

Appropriate therapy must be dependent on a knowledge of the causative agent. This is borne out by the successful management of syphilitic mucous patches and severe Vincent's stomatitis by penicillin, by the therapy of the oral lesions of sprue by folic acid, and by the lack of effectiveness of sulfa compounds and of penicillin in the treatment of herpetiform stomatitis and of Stevens-Johnson syndrome (stomatitis, conjunctivitis, respiratory tract symptoms, genitalia lesions and skin eruptions).

CANCER OF ESOPHAGUS

Early diagnosis of cancer of the esophagus is now of the greatest of importance, just as is early diagnosis of cancer of the pancreas, because operative removal of the growth with presumptive cure is now possible. Modern intrathoracic surgery has facilitated the resection of malignant lesions of the lower esophagus. If they are small and localized, complete extirpation is indicated. Three year cures have been reported. If the growth cannot be removed, freeing it from the surrounding tissues may temporarily alleviate obstructive symptoms.

PEPTIC ULCER

The tremendous interest in the peptic ulcer problem which has existed throughout the present century remains well sustained. In 1946, the Quarterly Cumulative Index Medicus lists 447 references to this subject. While most of the clinical interest in the management of patients with peptic ulcer centers around the control of gastric acid secretion, a refreshingly new approach to a solution of the enigma of gastroduodenal ulceration is noted in a few experiments dealing with mucosal resistance to erosion and peptic digestion. The barrage of publications by psychiatrists claiming that peptic ulcer is a psychosomatic disorder has not abated. In the author's experience, psychotherapy has neither cured the "peptic ulcer syndrome" nor, alone, shortened a symptomatic exacerbation.

Control of the acid pepsin secretion of the stomach by injections of enterogastrone has been reported. Enterogastrone is an extract of the intestinal mucosa which contains a humoral substance which depresses gastric secretion. Its development and clinical use have been reported upon by Ivy and his co-workers. Experimentally, it has proven highly successful in preventing peptic ulceration in "Mann-Williamson dogs," but has not prevented ulceration in animals subjected to repeated injections of histamine in oil and beeswax. Clinical reports are as yet meager, and the cases studied inadequately controlled. Relapses occur following a prolonged course of therapy. Enterogastrone is marketed by Armour Company in ampules for intramuscular use only. The dose is 200 mg. (5 cc.) daily for several months. It is expensive. There are a number of other methods of reducing gastric acidity by medicinal means which are simpler. Recently a combination of insoluble alkali and hog mucous extract has been marketed under the name of "Mucotin." It is claimed that this combination is better than alkali alone. As hog mucin has not stood the test of time as an anti-peptic ulcer agent, it is difficult to see how such a claim can be clinically substantiated.

VAGOTOMY

During the past two and one-half years a most dramatic and popular way of reducing gastric acid secretion has developed which also abolishes peptic ulcer pain. This is vagotomy. This operation has been strongly advocated in cases of peptic ulcer of psychic origin. As some physicians feel that most if not all cases belong in this category etiologically, it is easy to see why this operative procedure has been so widely utilized. Many authorities have agreed that it may be of specific value in the management of marginal ulcers—gastroduodenal ulcers. The operation has more and more frequently been combined with gastric resection which makes it impossible to properly evaluate the results of the nerve severing procedure. At present, vagotomy seems to be on the wane as a therapeutic procedure for peptic ulcer, although it undoubtedly has merit in a few highly selective cases. There are two reasons for this. First, it is not an altogether sound physiological procedure because an interruption of the psychogenic control of gastric secretion may not materially alter the local gastric phase of acid secretion. Second, the late end results of the operation are less and less encouraging.

DIETARY FACTORS IN PEPTIC ULCER

"Improving the resistance of the gastroduodenal mucosa" to peptic digestion is a meaningless phrase,

Read as a part of the Panel Discussion of What's New before the general meeting at the 77th Annual Session of the California Medical Association in San Francisco, April 11-14, 1948.

and yet it has appeared repeatedly throughout the past decades. Everyone agrees it should be done, but so far no one has been very specific on just how to accomplish the desired result. The therapeutic use of protein hydrolysates may indirectly achieve this purpose to a certain degree. As a negative nitrogen balance exists in some patients, an increased protein intake, particularly in the form of the hydrolysates, has allegedly produced more rapid healing of peptic ulceration and more rapid relief of pain than would otherwise be obtained. Only one controlled series of patients so treated has so far been reported. The results appear encouraging. Obviously, however, many ambulatory patients with peptic ulcer are on an adequate protein intake, and their resistance to peptic digestion could hardly by altered by this therapeutic procedure.

A dietary anti-ulcer factor which prevents gizzard erosions and cincophen gastric ulcers in chicks has recently been shown to give complete protection against histamine-induced peptic ulcers in guinea pigs. This factor is heat labile. It is present in raw milk, certain food fats, and in fresh greens. No adequate therapeutic trial of the factor in man has yet been reported. Enterogastrone may contain this factor.

GASTRIC CANCER

The diagnostic procedures necessary to the complete evaluation of a patient suspected of having gastric carcinoma cannot now be considered complete without carrying out special staining studies of the gastric sediment. Stained smears and paraffin sections of the sediment permit cytological examination which may lead to a positive diagnosis by definite recognition of tumor cells. Although such a positive diagnosis may not be possible in more than 10 or 20 per cent of cases, the procedure should be a routine one.

ULCERATIVE COLITIS

Unsuccessful forms of therapy for idiopathic ulcerative colitis are legion. Five new methods of treatment may ultimately fall into this same category, but must be considered at present because they may show merit in some instances. The first two methods are the use of penicillin and streptomycin. These antibiotics deserve a trial in patients showing signs of infection. Occasionally they seem to influence the course of the disease favorably. They are without beneficial effect in the majority of cases; usually those in which psychogenic factors, malnutrition, and allergy play an etiological role. The third, propyl-thiouracil, is reported to have caused improvement in a small group of patients by lowering the metabolism and thereby decreasing nervous tension. This therapy should be reserved for excessively emotional patients.

The fourth, ventriculin, a hog stomach extract, was reported as highly effective in about 90 per cent of a small group of patients. However, the author has found it without definite therapeutic effect in six consecutive cases. The fifth, intestinal mucosa extract, is said to promote remission in the milder forms of the disease. It is now available commercially as a powdered duodenal extract. The dose is a tablespoonful three times a day. It may contain a specific mucosa resistance factor.

SERUM HEPATITIS

The incidence of infectious hepatitis was high in military medical practice during World War II. It gradually became evident that some of the cases occurred following the injection of homologous blood products, both pooled plasma and whole blood. Cases are now being observed in civilian practice which follow blood bank transfusions and the injections of both fresh and frozen plasma. The incidence of homologous serum hepatitis in patients who have been given transfusions varies between 0.5 and 4.0 per cent, according to recent reports. A fatal outcome is not uncommon. The onset of jaundice is usually in the third month following transfusion, but may develop later.

The recognition of post transfusion hepatitis, with or without jaundice, should sound a note of alarm for those who promiscuously use blood and plasma at the operating room table and who commonly use it for its "tonic" effect. Fatal homologous serum hepatitis caused by a transfusion given to a dangerously ill patient is an acceptable risk, but the indication for transfusion should be clear and unmistakable, before a patient is subjected to such a risk, small as it may be at present.

PANCREATIC FERMENTS

The continued application of serum ferment determinations as a test for disturbed pancreatic function in acute pancreatic disorders indicates that this diagnostic procedure should be universally accepted. The serum diastase is increased early in acute pancreatitis, usually (but not invariably) during the first 12 to 24 hours, and may remain high for five or six days. The increase in diastase is measured in units of diastatic activity. The normal range is 60 to 180 units. Values above 200 units are distinctly abnormal; they may be over 3,000 units. An increase in serum lipase may occur earlier and persist longer in some cases of acute pancreatitis. These ferment determinations are rarely of any diagnostic value in the diagnosis of chronic pancreatitis or carcinoma of the pancreas.

490 Post Street.

QUESTIONS AND ANSWERS

DR. CLINE: Dr. Cheney, don't you believe that the term peptic ulcer should be given up because of the great difference in the treatment of gastric and duodenal ulcer and their prognosis? A. The answer is no. I believe the fundamental basic etiology of peptic ulcer is the initial acid erosion and peptic digestion which occurs in the majority of gastric ulcers as well as in duodenal ulcers. I do not think the term should be given up.

DR. CLINE: Dr. Cheney, please comment on the use of intraheptal for hepatic disease, dosage, precaution, limitations. A. That's another ten minute paper. I'm not at all certain in my own mind that the use of intraheptal given intravenously periodically as advocated by the manufacturers is any better than giving liver extract intramuscularly. I have been able to follow a few intraheptal treated cases for several months, and I have not been impressed that this method is superior to the other methods of giving liver extract over long periods of time. I trust that will answer the question.

What's New in Clinical Pathology

Alvin G. Foord, M.D., *Pasadena*

In more than 25 years of practice limited to laboratory medicine, the author has observed year after year hundreds of new tests and techniques. Many have been tried and many discarded. Some have been with us for years and to these we cling, since time has proved their merit. No old or new laboratory procedures can supplant a good history taking and physical examination, or that ability to size up a patient which a skilled clinician attains only by experience and use of careful judgment. The knowledge and ability to choose one or more pertinent laboratory examinations rather than a gamut of tests, old or new, should be the proper goal. However, progress that may help clinch a suspected diagnosis has been made recently in all fields of clinical pathology, only a part of which can be discussed in this short presentation.

URINALYSIS

The more generalized use of a concentration method for bilirubin in the urine, such as the Harrison method emphasized by Foord and Baisinger,[3] and Hawkinson,[7] has allowed the detection of bile pigment in the urine of cases, even before examination of the patient has shown presence of clinical icterus. Watson's filter paper strip modification[12] (Harrison spot test) has further simplified this test and is semiquantitative. The more generalized use of the Ehrlich reaction in determination of urinary urobilinogen[13] as an estimation of the degree of hemolysis in hemolytic blood dyscrasias or the presence of parenchymatous liver damage, has certainly been of great help.

No recently proposed method of determining the presence of glucose in the urine has supplanted Benedict's method, which has been a laboratory standby since October, 1911. However, for simplicity of testing in the physician's office or the patient's home, especially for the diabetic patient examining his own urine, the "Clinitest" has been of great help, especially if longer tubes are used than the ones supplied by the manufacturer. The presence of acetone can be simply and accurately detected by the use of a prepared powder, "Acetone Test," by simply dropping several drops of urine onto a small amount of reagent. Both of these reagents can be purchased in any supply house. The presence of protein (so-called albumin) in urine can best be done by means of Exton's test,[11] using sulfosalicylic acid rather than the older methods using nitric acid, or heat and acetic acid.

Much can be learned from examination of the urinary sediment, especially the finding of heme casts, in event of decreased urinary output in cases of lower nephron nephrosis occurring after traumatic shock, sulpha poisoning, prolonged subcritical blood pressure, crushing injuries, or hemolytic transfusion reactions. Even the estimation of the repeated daily output of urine in critically ill patients postoperatively, or those with high fevers, intestinal obstruction, or the conditions just mentioned, is of more value than the many blood chemical studies which are commonly ordered. Calling attention again to this source of information[8] about the patient is one of the most important additions to the literature of the last few years.

BLOOD CHEMISTRY

From the laboratory standpoint, the more general use of photoelectric colorimetry has been the greatest advance in the last few years. The electric eye has been substituted for the human eye and the technician has been eternally grateful. However, these new instruments have their flaws. They can give as much trouble as postwar automobiles, and must be treated as carefully. They have made many common tests more simple, have allowed newer modifications of many determinations, have cut down much labor and time, and at the same time have given more nearly accurate results.

Of particular importance lately has been the more general use of determining the amount of protein in the blood. The surgical literature and experience of most of us has shown beyond doubt the importance of maintenance of proper total protein and albumin levels in the blood for proper healing of wounds, resistance to infection and control of some types of edema. The substitution of chemical determinations for falling drop techniques is certainly an advance. The commonly used separation of the protein into albumin and globulin is of great value, but further division of the protein into albumins and alpha, beta and gamma globulins by electrophoretic methods has opened up a new field. By this method with the Tiselius apparatus, a graph roughly comparable to those obtained by spectrophotometric studies of metals is obtained. Enough work has been done to place the antibodies in the gamma globulins and the lipoproteins in the beta globulins. Expense of the apparatus and the length of time necessary to make determinations preclude general use at this time, but it is hoped that both may come down in the not too distant future. Also the use of Evans Blue[6] as an intravenous dye has simplified the determination of total blood and plasma volume and has called attention to the deficit of total protein

Read as a part of the Panel Discussion of What's New before the general meeting at the 77th Annual Session of the California Medical Association in San Francisco, April 11-14, 1948.

in the circulatory system, not measured by determining only the percentage of protein in the plasma. Relatively cheap modes of spectrophotometers can now be obtained, with which rapid and accurate determinations of sodium and potassium are possible, and much more information as to electrolyte and water balance should be available for more general use.

Another important advance has been the more wide use of properly chosen tests for liver function. Here, as in no other field of chemistry, the results must be correlated with the clinical aspects of the case, and the test tube and pipette cannot supplant clinical impressions. Experience with an increased number of cases of infectious hepatitic has shown the value of cholesterol cephalin flocculation and thymol turbidity tests, and the importance of urobilinogen determinations and bromsulphalein determination in the diagnosis and follow-up study of these cases. For a complete review of the use of the multiple tests in liver disease, Watson's articles[14] reporting intensive studies, as well as those of Osgood[9] and Giansiracusa and Althausen,[4] should be read.

In the field of determining renal function, the old standbys of concentration and dilution tests, phenolsulphonephthalein excretion, blood urea or non-protein nitrogen determinations and the urea clearance test have continued to serve excellently. The inulin clearance test in selected cases has proved of value in determining glomerular filtration, since it is excreted by the glomeruli alone. Diodrast has also been used as a sensitive indicator for clearance studies, since in one minute 700 cc. of blood is cleared of diodrast, whereas 125 cc. of blood is cleared of inulin and about 70 cc. of urea normally in the same period.

RH FACTOR

The clinical literature is replete with references on the importance of the Rh factor in obstetrics and the dangers of transfusing Rh negative persons with Rh positive blood. This danger is perhaps too much overemphasized, but certainly one should not make this mistake in the case of young girls, or women in the child-bearing age. From the laboratory standpoint the chief advances in the Rh field have been the refinement of technique in testing bloods for Rh type and determining the presence of antibodies in the blood. This has been possible partly because of the availability of potent serums prepared by purposely injecting Rh negative volunteers (chiefly medical students) with small repeated doses of Rh positive red blood cells. In the past the only satisfactory source has been the occasional mother who had delivered an erythroblastotic baby. Also the addition of protein to serum-red cell mixtures in the form of human serum, bovine albumin, or more simply gelatin, as described by Fisk and McGee,[1] has simplified the determination of Rh type, and of agglutinating or blocking antibodies in the serum. The use of the Coomb's anti-human globulin test has also been of great help in demonstrating the presence of blocking antibodies which occur in the blood of many women giving birth to babies with hemolytic disease of the newborn. These antibodies are capable of combining with Rh positive cells without producing agglutination, and may lead to hemolysis and all its sequelae. This test (Coomb's) is of particular value in determining whether or not the erythrocytes of the newborn have been sensitized. Fisk[2] finds that the gelatin method serves the same purpose, since the cells of sensitized infants are clumped in the gelatin solution whereas those of normal babies are not.

SEROLOGY OF SYPHILIS

The chief advance in the serology of syphilis has been in the attempt to stabilize the antigen used in the commonly used complement fixation and flocculation tests. By proper fractionation of the lipoids in beefheart, Pangborn has been able to obtain a stable fraction called cardiolipin, now commercially available to laboratories, which according to reports[5] from various laboratories summarizing many thousands of tests has given constantly good results with fewer false positive reactions than with the antigens used up until now. Rein's report[10] of the experiences of the Army serologic service has called attention to a variety of diseases in which false positive reactions have been obtained. These include, of course, a high percentage in cases of leprosy and malaria, but also a lower percentage of cases of febrile diseases such as virus pneumonia, upper respiratory infections, and infectious mononucleosis. These false positive reactions on the whole were weak and disappeared slowly within a period of three months or less. It is hoped that the use of cardiolipin antigen will decrease the number of these false positive tests in the diseases mentioned, as it has nearly completely in a large series of malaria cases.

BACTERIOLOGY

To mention what's new in bacteriology would necessitate discussion of nearly all the common bacterial diseases. However, of most clinical importance has been the more widespread use of concentration methods for demonstration of tubercle bacilli in large amounts of sputum—one or three day specimens—or in material obtained by gastric lavage in those patients who expectorate little. The use of cultures for tubercle bacilli is a step in advance—but the guinea pig will still be used as much as ever, and preferably more. The use of a chamber containing about 10 per cent carbon dioxide has been obligatory in the isolation of fastidious organisms, especially the gonococcus, meningococcus, bacillus abortus, and influenza bacilli, but bacteriologists have found that even the common pyogenic organisms grow much better in this medium than in air. Some bacteriologists now use the CO_2 chamber for routine culture work. Also of great help to the clinician has been the determination of sensitivity of offending bacteria to the sulfa drugs, penicillin and streptomycin.

HEMATOLOGY

The chief advance in hematology in the last few years has been the more common use of studies of bone marrow, obtained usually from the sternum or the crest of the ilium or from the spinous process of a vertebra. Certainly this is not needed in most cases of leukemia or the common anemias, but in questionable cases, especially in those with unexplained leukopenia, anemia or splenomegaly, much help may sometimes be obtained. However, this procedure is not the "open sesame" to a diagnosis that some would have us believe.

Damashek's reports of the presence of hemolysins demonstrable by newer methods in the blood of certain types of acquired hemolytic anemia has opened up this field again, and it is hoped that in the next few years others may demonstrate the same findings and clear up this rather muddled subject, both from the standpoint of diagnosis, and treatment.

SUMMARY

Many new tests and techniques have been added to the scope of clinical pathology in the last few years. Few of these will supplant most of the well known, commonly used tests of today. A new test may be merely a special, expensive method of obtaining information, or it may be invaluable and to the point. One test, or a few tests, if carefully selected, will suffice for all but the rare case. No laboratory investigations can supplant proper clinical study of a patient, and no laboratory gadget will ever replace a keen clinician's mind.

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REFERENCES

1. Fisk, R. T., and McGee, C. A.: The use of gelatin in Rh testing and antibody titration, Am. J. Clin. Path., 17:737 (Sept.), 1947.

2. Fisk, R. T.: Personal communication.

3. Foord, A. G., and Baisinger, C.: Comparison of tests for bilirubin in urine, Am. J. Clin. Path., 10:238 (March), 1940.

4. Giansiracusa, J. E., and Althausen, T. L.: Diagnostic management of patients with jaundice, J.A.M.A., 134:589 (June 14), 1947.

5. Giordano, A. S.: Culbertson, C. S., and Higginbotham, M. W.: Cardiolipin antigens in serologic tests for syphilis, Am. J. Clin. Path., 18:193 (March), 1948.

6. Gregersen, M. I.: A practical method for determination of blood volume with the dye T-1824, Jour. Lab. & Clin. Med., 29:1266 (Dec.), 1944.

7. Hawkinson, V., Watson, C. J., and Turner, R. H.: A modification of Harrison's test for bilirubin in the urine, J.A.M.A., 129:514 (Oct. 13), 1945.

8. Lucke, B.: Lower nephron nephrosis, Military Surgeon, 99:371 (Nov.), 1946.

9. Osgood, E. E.: Interpretation of liver function tests, J.A.M.A., 134:585 (June 14), 1947.

10. Rein, C. R., and Elsberg, E. C.: Studies on the incidence of false positive serologic reactions for syphilis, Am. J. Clin. Path., 14:461 (Sept.), 1944.

11. Todd and Sanford: Clinical diagnosis by laboratory methods, 10th Ed., W. B. Saunders Co., p. 94, Philadelphia.

12. Watson, C. J., and Hawkinson, V.: Semiquantitative estimation of bilirubin in the urine by means of the barium strip modification of Harrison's test, J. Lab. & Clin. Med., 31:914 (Aug.), 1946.

13. Watson, C. J., and Hawkinson, V.: Studies of urobilinogen. VI. Further experiences with the simple quantitative Ehrlich reaction, Am. J. Clin. Path., 17:108 (Feb.), 1947.

14. Watson, C. F., and Hoffbauer, F. W.: Liver function in hepatitis, Ann. Int. Med., 26:813 (June), 1947.

Anticoagulant Therapy in Postoperative Venous Thrombosis

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THROMBO-EMBOLIC disease of the venous system following surgical procedures has attracted tremendous interest among internists and surgeons during the past decade.

Ochsner [10] has divided thrombo-embolic diseases into two groups: Thrombophlebitis and phlebothrombosis, and this classification has been of real clinical help.

Thrombophlebitis is characterized by infection in the vein accompanied by perivenous lymphangitis. This disease is easily recognized clinically because the patients present an elevation of temperature, redness and swelling of the leg, and redness occasionally along the course of the vein.

The treatment of this type of venous thrombo-embolic disease is relatively simple. With elevation of the extremity and rest, plus the use of anticoagulants, fatal pulmonary emboli seldom occur.

Phlebothrombosis is characterized by a clot in the small venules which gradually travels upward. Very little perivascular inflammation is noted. The temperature is very slightly elevated and the condition is frequently not recognized until a fatal embolism has resulted. The mechanism of this type of thrombo-embolic disease is not altogether clear. Bancroft [4] in reviewing 2,000 surgical cases stated that the patients fall in the so-called clotting group having a high prothrombin and fibrinogen index. Loewe [9] stresses the significance of clumping of erythrocytes in the dilated arterioles, which he attributed to the loss of plasma in the highly permeable vascular wall. He refers to these stranded red cells as a sludge. He also emphasizes that the blood platelet count rises rapidly in the immediate postoperative period and the platelets become hyperadhesive, reaching the maximum about ten days after the operation. All these mechanisms would contribute, of course, to the formation of intravascular clots in the small venules, which may extend to the larger veins.

Early detection of phlebothrombosis is difficult. If a patient has a minimal elevation of temperature and every other source for such a temperature has been excluded, then the presence of an intravascular clot should be suspected. Homans [7] has drawn attention to the fact that if the foot is hyperextended, causing extension of the gastrocnemius muscle, the patient complains of pain in the calf, whereas when lying normally he is unaware of any discomfort. This is a simple test and should be done by the resident staff or the attending surgeon on any patient who may run an unexplained minimal temperature.

Read as a part of the Panel Discussion of What's New before the general meeting at the 77th Annual Session of the California Medical Association in San Francisco, April 11-14, 1948.

All surgeons realize the seriousness of venous thrombosis which, if unrecognized, frequently results in sudden death. In a report of 1,665 cases of thrombo-embolic disease developing in surgical patients at the Mayo Clinic,[5] it was found that in 405, or 24.3 per cent, pulmonary embolism occurred in the absence of clinical or necropsy evidence of venous thrombosis. This report included 135 cases of fatal embolism, 87 of which came to autopsy. These figures indicate the importance of early diagnosis and prompt therapeutic procedures to eliminate the venous thrombosis.

From the report of the Mayo Clinic,[5] it is obvious that early diagnosis of venous thrombo-embolic disease is difficult. In only 1,260 of a total of 1,665 cases was the diagnosis made either clinically or at autopsy. In the remaining 405 cases or 24.3 per cent in which pulmonary embolism occurred there was no clinical or necropsy evidence of venous thrombosis. This suggests that the entire thrombus became detached.

TREATMENT

Neither medical nor surgical management of venous thrombo-embolic disease is clear-cut. There are those who advocate early surgical treatment and others who rely exclusively on anticoagulants.

Anticoagulation therapy may take any of the following forms:

1. Heparin intravenously.
2. Heparin subcutaneously.
3. Heparin in Pitkin's menstruum.
4. Heparin and Dicumarol.
5. Dicumarol alone.

Heparin intravenously is not generally used because a continuous intravenous infusion requires constant nursing supervision and recording of the clotting time every hour or every two hours. This form of treatment is expensive and difficult to administer.

Bauer [6] and Jorpes [8] of Sweden administered Heparin subcutaneously every three hours without any ill effect. Fifty to 70 mg. of Heparin may be given, the amount depending on the weight of the patient. Clotting time tests by the Lee-White technique should be done before administration of Heparin, a half hour afterwards, and preferably two and a half hours later. However, the Swedish investigators do not observe clotting times so carefully, and they report no ill effects. A high elevation in the clotting time usually occurs within 30 minutes after subcutaneous injection and the clotting time will usually reach 15 to 20 minutes before the three-hour period has elapsed.

The Pitkin menstruum advocated by Loewe,[9] consisting of Heparin in 18 per cent gelatin, 8 per cent

dextrose, 0.5 per cent glacial acetic acid with distilled water to make 100 per cent. can be given subcutaneously. Loewe advocates using 300 mg. subcutaneously every two days, but some individuals are hyperreactive and others are hyporeactive and therefore variation of the dosage may be necessary. Some individuals who weigh much more than 150 pounds and are hyporeactive are given 400 mg.; very thin people, who may be hyperreactive, are given 200 mg. The clotting time by this method can be kept at 30 minutes. Objections to this method of treatment are that it is painful, that abscesses occasionally develop as a result of the injections, and that it is very expensive.

Heparin and Dicumarol may be administered simultaneously. Heparin in a dosage of 50 to 70 mg. given subcutaneously every three hours for 18 to 24 hours, and Dicumarol given by mouth in a dosage of 300 mg. and then reduced to 200 mg. or less, will usually give the desired result.

Dicumarol given alone may be quite satisfactory in those patients who have a true thrombophlebitis and for whom rapid anticoagulation therapy is not necessary. If this method is used the prothrombin activity should be determined by the Quick or Link-Shapiro method, and the clotting time by the Lee-White technique. The first day, 300 mg. of Dicumarol is given and the prothrombin activity determined. Then the dosage can be regulated. The patient should receive 300 mg. of Dicumarol orally once a day until the prothrombin time is 30 seconds, and 100 to 200 mg. if the prothrombin time exceeds 35 seconds. If it exceeds 60 seconds, 72 mg. of Vitamin K should be given intravenously. This will usually bring the clotting time down without difficulty. If a transfusion is given for supportive reasons, the 300 mg. dose of Dicumarol should be given after the transfusion has been completed. One objection to this method is the development of marked susceptibility to the drug; and bleeding tendencies are not uncommon. In patients in the older age group with arteriosclerosis, the drug must be used with extreme caution.

Surgical operation does have a place in the treatment of thrombo-embolic disease of venous origin, and in patients who have repeated pulmonary emboli, interruption of the venous return may be desirable. One of the difficulties in surgical treatment is determination of the exact site of the thrombosis. Some surgeons advocate superficial femoral ligation[1] and also deep femoral ligation.[2] Recently ligation of the vena cava has been advocated.

Experience with patients who really need vein ligation for thrombo-embolic disease has led the author to the opinion that ligation of the vena cava is preferable to other procedures, as it is the only sure means of entering well above the thrombus.

In the Mayo Clinic report[5] 18 (6.6 per cent) of 273 patients with ilio-femoral thrombophlebitis, clinically diagnosed, died of pulmonary embolism. This experience raises a question as to the treatment of choice. Autopsy revealed that in four of these 18 cases, the fatal embolism occurred from 11 to 32 days after the onset of the disease and the embolism came from a fresh thrombus in the opposite ilio-femoral vein. These statistics plus the recent observations of Allen[3] on 1,180 patients operated upon, half of whom were given Dicumarol and the other half not, gives reason for considering anticoagulant therapy for all patients operated upon. Allen found that there were 75 per cent fewer cases of thrombo-embolic disease among the 580 patients given Dicumarol than there were in the 580 not given the drug. There were two deaths from hemorrhage in the group given Dicumarol, but no deaths from pulmonary embolism.

It may be concluded, therefore, that vena cava ligation is preferable in cases needing surgical interruption of the venous system, and that anticoagulant therapy might be indicated as a routine postoperative measure.

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REFERENCES

1. Allen, A. W., Linton, R. R., and Donaldson, G. A.: Venous thrombosis and pulmonary embolism: Further experience with thrombectomy and femoral vein interruption, Jour. A.M.A., Vol. 128, 1945.

2. Allen, A. W., Linton, R. R., and Donaldson, G. A.: Venus thrombosis and pulmonary embolism, Jour. A.M.A., Vol. 133, 1947.

3. Allen, A. W.: Personal communication.

4. Bancroft, F. W.: A review of the various methods used in the treatment of phlebothrombosis of the extremities, N. Y. State Journal of Med., Vol. 46, February, 1946.

5. Barker, N. W., Nygaard, K. K., Walters, W., and Priestley, J. T.: A statistical study of postoperative venous thrombosis and embolism, Proc. Staff Meet., Mayo Clinic, Vol. 16, 1941.

6. Bauer, G.: Heparin in venous thrombosis, Jour. of A.M.A., Vol. 131, 1946.

7. Homans, J.: Varieties of thrombophlebitis of limbs; their origin, course, and treatment, Amer. Jour. of Surg., Vol. 44, 1939.

8. Jorpes, J. E.: Anticoagulant therapy in thrombosis, Edinburgh M. J., Vol. 53, 1946.

9. Loewe, Leo, Rosenblatt, P., Hirsch, E.: Venous thromboembolic disease. Journal of the Amer. Med. Assoc., February 16, 1946, Vol. 130.

10. Ochsner, A., and DeBakey, M.: Therapy of thrombophlebitis and phlebothrombosis, Archives of Surgery, February, 1940, Vol. 40.

What's New in Anesthesia

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> We must not only search for, and procure a greater number of experiments, but also introduce a completely different method, order, and progress of continuing and promoting experience.
>
> Francis Bacon, *Novum Organum:* Aphorisms. Book 1, *C.*

As space and time have neither beginning nor end, so too, with man's ingenuity, new things will continue to be accomplished. In the second book of his *Advancement of Learning* Francis Bacon asks the question, "Why should a few favourite authors stand up like Hercules' Columns, to bar further sailing and discovery . . .?" Farther on he quotes from Homer's *Hymn to Pan* that "The ancients have, with great exactness, delineated universal nature under the person of Pan." Among the many titles of this ancientest of gods was "president of the mountains"; and he had the power of striking terrors, especially such as were vain and superstitious, whence they came to be called *panic* terrors. The fable is, perhaps, the noblest of all antiquity, and pregnant with the mysteries and secrets of nature. Bacon points out that Pan was made god of seekers after every natural action, every motion, every process.

Since the days of Bacon and seemingly following his admonition, his counsel, there have been innumerable and prodigious advances in all branches of science. Just now, as is pointed out by E. U. Condon, director of the National Bureau of Standards (Science, January 2, 1948), we are at the threshold of an unimaginable mastery of our material environment, "for science, which provides that mastery, is in its Golden Age." Doctor Condon very plainly sounds the warning note that. "From one point of view life today is a race—a race between knowledge in the physical sciences, which gives material mastery, and general ignorance, which retards or rejects mastery of our environment. Rejection means no more and no less than destruction of civilization as we know and cherish it." One of his many profound and cogent statements is that "Radioactive isotopes will permit us to explore the structures and constitution of molecular aggregates, for such isotopes can be introduced into a system as scientific detectives . . . they can be traced and studied by means of the radiation they emit. Tracer studies of this kind will unravel secrets in biology, physiology, medicine, chemistry, and metallurgy." By the application of this method of investigation we may expect also to have solution of some of the problems which particularly concern the anesthetist. This constitutes something new in anesthesiology, and I know that among others, Tuohy[16] of Georgetown University, Washington, D. C., is actively engaged in investigation involving isotopes.

We may expect valuable new discoveries from tracer studies in salt and water metabolism, in the inorganic as well as in the organic compounds of phosphorus, and in protein metabolism. Indeed, several such studies are being made at present. The anesthetist is interested in some of these. Early last year were published the Croonian Lectures of Marriott,[12] delivered at the Royal College of Physicians in London. They were on *Water and Salt Depletion.* Although this is an old subject, he throws new light upon it as he draws attention to the consequences of wrong treatment and the serious pitfalls in the treatment of different types of dehydration and salt depletion. "The subject is far from being as simple as is often assumed—an assumption which may lead to the control of water and salt administration being left to nurses or junior residents. The essential principle in the treatment of water and salt depletion is that the patient shall be given water or salt, or both, in the amounts that each is lacking. Therefore, as in all conditions, correct diagnosis—in this instance quantitative as well as qualitative—is essential to correct treatment." He gives the facts and principles on which diagnosis depends and points out that "the main questions which arise in practical treatment are: (1) What fluid should be administered? (2) How much? (3) By what route? (4) At what rate?" He deals with each of these very comprehensively, gives definite rules to follow and finishes with the statement: "Water and salt are, perhaps, practically the most important substances it is in our power to administer. They can be so used that they can achieve seeming miracles: or they can be so misused as to lead to a fatal issue. Their proper use is not the simple matter it is often assumed to be."

Marriott intimates that further study is needed particularly of the electrolytes and the acid-base balance. Tracer studies may lend a hand here as we mark sodium, potassium and phosphorus. The physician-anesthesiologist, he of the younger generation, has much with which to indulge his imagination, he may feel the sentiment of the physician-poet, John Keats, in his *Fancy*:

> Ever let the Fancy roam,
> Pleasure never is at home:
> At a touch sweet Pleasure melteth,
> Like to bubbles when rain pelteth;
> Then let winged Fancy wander
> Through the thought still spread beyond her:
> Open wide the mind's cage-door,
> She'll dart forth, and cloudward soar.

During the whole of 1947, midst continuing clouds of social unrest, anesthesia received so many new additions that I know not how to do more than mention some in passing. Smith[14] allowed himself to be the

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subject of experimentation while his collaborators made observations. It turned out that his own observations were most valuable. He was given, intravenously over a period of 33 minutes, "a dose of *d*-tubocurarine chloride two and one-half times that necessary for complete respiratory paralysis and adequate for complete skeletal muscular paralysis . . . Inasmuch as no changes occurred in the electroencephalogram, consciousness and sensorium, or in any aspect of higher central nervous system function, it is concluded that *d*-tubocurarine chloride has no significant central stimulant, depressant or analgesic action. Attention is called to the importance of this observation for the proper use of curare as an adjuvant in anesthesia." This last statement is made in spite of the excellent results which Smith obtained when he used curare as the sole agent to provide satisfactory conditions for various types of surgical procedures in infants and children.[15]

Dripps and Sergent[7] reported on the utility of a new curare-like substance, namely, dihydro-beta-erythroidine. This drug paralyzes conduction through the neuromyal junction and has the advantage over curare of not causing the liberation of histamine. (Comroe and Dripps[6] had previously reported that following the administration of curare and some of its derivatives, reactions occurred in the form of skin wheals, bronchospasms, depression of blood pressure and hemorrhage into the intestinal tract. The clinical significance of these reactions to the anesthesiologists is not as great as to physicians who might employ curare in unanesthetized patients. The reason for this is that anesthesia decreases all anaphylactic and allergic responses, and liberation of histamine falls in this category. Certain it is that bronchospasm and hypotension are seen in anesthetized patients but they estimate the incidence of this to be under 0.5 per cent.)

A disadvantage of the new curare-like substance is its tendency to cause a great depression of blood pressure. It is a crystalline substance which can be weighed out accurately and need not be subjected to bio-assay. Comroe and Dripps are continuing to use it. Griffith of Montreal, it is true, did make a great contribution to anesthesia when, in 1942, he introduced the use of curare.

Quite recently, Dripps and his co-workers have made several valuable additions to knowledge in anesthesia. I shall tell of two more of them:

1. Their work on the responses of normal man to low oxygen mixtures.[8] It was interesting to note that the respiratory response was an unpredictable affair and it was not until mixtures as low as 10 per cent oxygen were reached that there was any major respiratory stimulation. Even at 8 per cent oxygen, some people showed no increase in breathing. This is contrary to the teaching in the current textbooks of physiology. They found that the pulse rate was a better index of hypoxia than was respiration. Even at 16 to 18 per cent oxygen there was some increase in pulse rate and this progressed in a straight line relationship. This fundamental type of work they plan to extend to anesthetized subjects. They say that "as anesthesiologists we must not only know what normal man does but be also concerned with how these responses are affected by narcosis."

2. They present data which suggest that the hypotension not infrequently seen at the conclusion of cyclopropane anesthesia is related in part at least to an abnormally high level of carbon dioxide in the arterial blood during anesthesia.[9] This increase in arterial carbon dioxide tension results from the respiratory depressant action of cyclopropane. In an empirical manner, I have noticed for quite some time that through the reduction of the oxygen percentage by the addition of nitrogen so that during the administration of cyclopropane there will be approximately 20 per cent of cyclopropane, 30 per cent of oxygen and 50 per cent of nitrogen, this "cyclopropane shock" does not occur. I do not know how to explain, and it would seem that still further investigation is needed.

While on the theme of cyclopropane, it is important to recount that Beecher[2] and his associates have just completed some works "which indicate that the circulation in the capillary beds is cut down by cyclopropane. This is inferred from the marked curtailment of lymph flow collected under standardized conditions. This also fits in well with the observations of Chambers and Zweifach, who observe that "the capillary beds under cyclopropane were far less active than under ether." And they "have measured the renal blood flow, by the technics of Homer Smith, in man and have found that cyclopropane produces considerably greater restriction of renal plasma flow than was the case under ether. These observations all fit together." Beecher[2] has made several interesting and valuable contributions to the literature of anesthesia during 1947, and lately has told me that "another line of work which will soon be ready for publication is our study of the great family of amidones. I do not believe it is too strong a statement to make, to say that these constitute the greatest advance in the field of narcotics that has transpired in decades."

Through the past year Burstein and his associates have been doing some good work on anesthesia for thoracic surgery,[3] in which they stress the importance of protecting the patient from untoward reflex changes, the importance of ample oxygenation and of carbon dioxide elimination. Their technique is so substantial that it permits of momentary modifications and changes, and they practice "compensated respiration," a term applied to the assisting of spontaneous breathing in combating "pulmonary decompensation." Burstein[4] has developed some newer concepts in the utility of intravenous procaine to reduce cardiac irritability during general anesthesia and to prevent cardiac hyper-irritability in patients with pre-existing cardiac disease who are to be anesthetized with cyclopropane. The dose of procaine has been increased from 50 mgm. to 100 mgm. in a 1 or 2 per cent concentration. In an excellent review, Trifari and Martin[17] bring the subject of intravenous anesthesia right up to date, and comment very favor-

ably on the employment of this method of giving pentothal, curare, procaine and morphine.

Properly to answer the question "What's New in Anesthesia?" would require much more time than is practical in a restricted symposium, it may suffice therefore just to mention a few more new things which are at the moment particularly appealing. New vasopressor drugs continue to come to the fore, for example that described by Jackson[11] and called EA-83, or 2-methylamino-6-hydroxy-6-methyl heptane, or 2-methylamino iso-octanol. He categorizes it as sympathomimetic and finds it to hold special promise as a strong heart and circulatory stimulant in cases of circulatory collapse. Barrett[1] has described the analeptic effect of sodium succinate on barbiturate depression in man. He thinks very highly of this substance. Spinal anesthesia in obstetrics is on the increase and has been dealt with very comprisingly by Cullen and Griffith.[5] Then there are the studies on diffusion respiration by Draper, Roth, Spencer and Whitehead.[13] These laboratory workers attribute the survival of dogs, purposely subjected to respiratory arrest under controlled conditions, to the existence of diffusion respiration; and they supply several informative data. Lastly, I shall mention the "jet injection" or hypospray brought forward by Hingson and Hughes[10] and being used concomitantly by Tuohy.[16] They give several possible disadvantages to this new method, but point out as many advantages. They believe the use of the "instrument offers real promise to the medical profession."

It must be said, in conclusion, that I do really believe that the best of all that's new in anesthesia is *the new and widespread interest in the provision of opportunities for those who desire to learn anesthesia.* For each young aspirant, let us increase the timeliness to unfold inclination and to develop thought. Then, with feeling, he may say, with Emerson:

I am not poor, but I am proud,
Of one inalienable right,
Above the envy of the crowd,—
Thought's holy light.

Better it is than gems or gold,
And oh! it cannot die,
But thought will glow when the sun grows cold,
And mix with Deity.

THOUGHT

McGill University.

REFERENCES

1. Barrett, R. H.: The analeptic effect of sodium succinate on barbiturate depression in man, Anesth. and Analg., 26:74 and 105 (Mar.-Apr. and May-June), 1947.

2. Beecher, H. K.: Personal communication.

3. Burstein, C. L., and Alexander, F. A. D.: Anesthesia for thoracic surgery. Management in an Army General Hospital Overseas, Anesthesiology, 8:36 (Jan.), 1947.

4. Burstein, C. L.: Personal communication.

5. Cullen, W. G., and Griffith, H. R.: Postpartum results of spinal anesthesia in obstetrics, Anesth. and Analg., 26:114 (May-June), 1947.

6. Comroe, J. H., Jr., and Dripps, R. D.: The histamine-like action of curare and tubocurarine injected intracutaneously and intra-arterially in man, Anesthesiology, 7:260 (May), 1946.

7. Dripps, R. D., and Sergent, W. F.: Use of a new curarizing agent, dihydro-beta-erythroidine, for the production of muscular relaxation during anesthesia and surgery, Anesthesiology, 8:241 (May), 1947.

8. Dripps, R. D., and Comroe, J. H., Jr.: The effects of the inhalation of high and low oxygen concentrations on respiration, pulse rate, ballistocardiogram and arterial oxygen saturation (oximeter) of normal individuals, Am. Jour. Physiol., 149:277 (May), 1947.

9. Dripps, R. D.: The immediate decrease in blood pressure seen at the conclusion of cyclopropane anesthesia: "Cyclopropane shock," Anesthesiology, 8:15 (Jan.), 1947.

10. Hingson, R. A., and Hughes, J. G.: Clinical studies with jet injection. A new method of drug administration. Anesth. and Analg., 26:221 (Nov.-Dec.), 1947.

11. Jackson, D. E.: The general pharmacological action of a new vasopressor drug, EA-83 (2-methylamino-6-hydroxy-6-methyl heptane, 2-methylamino iso-octane), Anesth. and Analg., 26:1 and 64 (Jan.-Feb. and Mar.-Apr.), 1947.

12. Marriott, H. L.: Water and salt depletion, British Med. Jour., Parts I, II and III, Feb. 15, (p. 245), March 8 (p. 285), and March 15 (p. 328), 1947.

13. Roth, L. W., Whitehead, R. W., Draper, W. B., and Spencer, J. N.: Studies on diffusion respiration II and III, Anesthesiology, 8:294 and 524 (May and Sept.), 1947.

14. Smith, S. M., Brown, H. O., Toman, J. E. P., and Goodman, L. S.: The lack of cerebral effects of D-tubocurarine chloride, Anesthesiology, 8:1 (Jan.), 1947.

15. Smith, S. M.: The use of curare in infants and children, Anesthesiology, 8:176 (Mar.), 1947.

16. Tuohy, E. B.: Personal communication.

17. Trifari, L. M., and Martin, S. J.: Civilian and military aspects of intravenous anesthesia, Anesth. and Analg., 26:45 (Mar.-Apr.), 1947.

QUESTIONS AND ANSWERS

Question: Dr. Bourne, what are the added dangers in spinal anesthesia in obstetrics, and how may these be prevented or modified?

DR. BOURNE: The chief danger is the likelihood of the anesthesia becoming too high, seemingly on account of the increased intra-abdominal tension in pregnancy. Small doses of whatever drug is used ought to be employed and they should be made heavy by using a solvent of 10 per cent dextrose. Air bubbles must be avoided, injection ought not to be made while the uterus is contracting, and the patient must be postured with great care. An analeptic should be in readiness for prompt intravenous administration should the blood pressure fall immoderately, and oxygen ought to be given routinely. Another danger, or rather, disadvantage, is that of headaches. These are more apt to occur after spinal analgesia in obstetrics than otherwise, perhaps on account of the greater activity of the patient. These headaches may be modified by closer attention to posture and by the judicious increase in the use of sedatives.

What's New in Radiology

Wilbur Bailey, M.D., *Los Angeles*

RECENT developments in surgical techniques permitting relief of many developmental abnormalities in the heart and great blood vessels have focused the attention of radiologists on ways to get diagnostic and preoperative information regarding the anatomic and functional abnormalities of these structures.

The aorta can be given the opacity necessary for roentgenographic examination by injecting an opaque substance into it just above the level of the renal arteries: the great vessels in the neighborhood of the heart can be filled by injecting the substances into the vessels of the arm or neck. Cerebral angiograms can be made by injecting an opaque substance such as Thorotrast into the carotid artery. All these methods are being used more frequently, as is the injection of opaque substance into the veins of the lower extremity so that the patency of the veins can be determined by roentgenography.

By far the most dramatic recent development is a practical method for venous catheterization of the heart. A team of three to five physicians accomplishes this by using a radio-opaque woven silk catheter which has a curved tip. This catheter, about 100 cm. long, is introduced into the median basilic vein in either the right or left antecubital space after novocaine anesthesia. It is threaded into the vein and aimed at the desired area by pushing or twisting the proximal end. Once the catheter gets beyond the axillary vein the possibilities for further travel include all of the great veins. It may, for example, go into the jugular vein, it may by-pass the heart and go into the inferior vena cava and then enter either the right or left renal vein, or it may go into one of the hepatic veins.

By patience the tip can be maneuvered under fluoroscopic guidance into the right auricle and thence through the tricuspid valves into the right ventricle. Pressure measurements and blood specimens can be taken as each new region is entered. The tip of the catheter may then proceed further into the pulmonary artery and may even reach out to occlude one of the smaller branches of the pulmonary artery. When the tip of the catheter goes this far, the findings are of particular interest, because suction on the tube will cause the blood to flow in a reverse direction through the regional lung capillaries, with the result that blood showing 95 per cent oxygenation will be obtained.

Valuable data for accurate diagnosis can be obtained by analyzing specimens of blood from the various chambers of the heart for oxygen content, and correlating this data with manometric readings. Such findings are of great help because of the present vast improvements in corrective surgery for congenital abnormalities of the heart and great vessels. Auricular or ventricular septal defects can be accurately recognized by venous catheterization, for in either case the oxygenated blood from the left side of the heart will be revealed by its high oxygen content.

The tetralogy of Fallot or patent ductus arteriosus can likewise be distinguished because of abnormally high manometric readings. The size of a cardiac chamber is sometimes clearly outlined by a catheter which forms a loop or two within this structure. Except for occasional extra systoles which may occur when the tricuspid valve is being passed, there have been no untoward symptoms in more than 100 cases in which this procedure has been done by a Boston group. Autopsies on patients dying from other causes revealed no abnormalities in the heart or great vessels which might have been attributed to the catheterization.

Cerebral angiography, although it has been employed for many years, is becoming increasingly more popular in this country because of the satisfactory way in which the cerebral blood vessels can be outlined. By making a series of films separated by very short intervals, it is possible to make an arteriogram, followed by a capillary phase, followed by a venogram, all on the same patient and at the same time. Intracranial aneurysms, 80 per cent of which are congenital in origin, are readily demonstrated by such methods, as are arteriovenous fistulae, hemangiomata and various brain tumors which have a particularly rich blood supply. If obstruction of the sagittal sinus is present, corollary vessels such as the facial vein are clearly outlined.

In discussing modern trends in radiology, the increasing popularity of various different methods of pelvimetry should be mentioned. With the more accurate information obtainable with modern methods, roentgen pelvimetries in all cases in which diagnosis is doubtful, and as a routine for all primiparas, are rapidly becoming a standard procedure.

When it comes to the consideration of advances in radiation therapy, no discussion would be complete without mentioning that the greatest present problem is what to do about too much radiation. We have known for years about the effect of over-irradiation on a chronic basis, because of occasional patients such as watch-dial painters who pointed radium-containing brushes with their lips, over-enthusiasts who drank radioactive waters in great quantities, and patients who were exposed accidentally to large doses of x-rays over the entire body.

It remained for the atom bomb explosion at Hiroshima to demonstrate the acute effects of generalized over-irradiation on a large population. Such over-

Read as a part of the Panel Discussion of What's New before the general meeting at the 77th Annual Session of the California Medical Association in San Francisco, April 11-14, 1948.

irradiation could become the No. 1 medical problem in the United States at any time. To my knowledge, there are no cures of promise yet known. Ground, water, or clouds polluted by radioactive materials are remarkably difficult to decontaminate, as the Navy has indicated by recently sinking some of the ships used several years ago in the Bikini experiments because they remained hopelessly radioactive.

This long life of some of the radioactive isotopes—radioactive carbon, for instance, has a half life of 6,000 years—makes dangerous contamination with its threats to personnel a constant hazard. In one laboratory in which radioactive isotopes had been used some six years ago, a check of the drains and sewer pipes revealed these structures still to be giving off radioactivity. Because contamination is so easy, it must be given constant consideration by those who handle radioactive isotopes. Such handling is to be done preferably by workers who from experience respect radioactive material. Appropriate means of detecting radioactive material which has leaked or spilled should be available.

The generalized effects which might be expected from the intravenous use of such isotopes as P-32 were predictable, because of earlier experiments with intravenously injected radium and its decomposition products. Now that more than ten years has elapsed since P-32 was first used for leukemia and other blood dyscrasias, many workers feel it has no advantage over the usual type of radiation therapy. Small doses of P-32 are of definite value in polycythemia vera. Whether better than other forms of radiation therapy or phlebotomy remains a moot question.

When it comes to the specific use of radioactive isotopes for the purpose of affecting particular organs or tissues, fields of tremendous interest are opened. Isotopes can be used as tracer substances, or if enough of the substance is absorbed by the tissue in which radiation therapy is desired, isotopes can be used for their therapeutic effect.

Radioactive iodine is, of course, the prime example of an isotope which is accumulated in sufficient concentration to exert a definite effect on a particular tissue—in this case the thyroid. Within a few hours after the ingestion of radioactive iodine the normal thyroid collects up to 80 times the quantity to be expected from uniform diffusion into the general body tissues and the hyperplastic thyroid may be expected to collect up to several hundred times this quantity.

Although the treatment of hyperthyroidism is still in the experimental stage, it has now been proven on both human beings and animals that the gland can be fibrosed completely or made hypoactive by administering radioactive iodine orally. This method seems likely soon to become the treatment of choice.

Of course, everyone wants to know whether cancers of the thyroid can be treated by radioactive iodine. Unfortunately, radioactive iodine is seldom effective in such cases, because malignant thyroid tissue—like all tumor tissue—often tends to be very primitive in nature and, therefore, loses its ability to pick up iodine from the blood stream. There are a few cases on record, however, in which adenocarcinomata have demonstrated this ability.

An interesting example is the case of a five-year-old boy from whom a carcinoma of the thyroid was apparently completely removed. However, in a few weeks large masses appeared in both sides of the neck. A tracer dose of radioactive iodine showed by Geiger counter measurements that these masses took up approximately 2,000 times as much iodine as did the normal tissue. Because of this enormous selectivity, it was possible to give this small child 14 mc. of radioactive iodine and to have nearly all of it absorbed in the malignant recurrences. Although the number of lymphocytes dropped somewhat as a result of this heavy dose, the count soon returned to normal, but the masses in the neck disappeared. Four months later, after the patient had been given 20 mc. of radioactive iodine he actually developed myxedema. This child, who was obviously incurable from a surgical or any other point of view, has shown no sign of recurrence for a period of one and a half years.

In giving radioactive iodine it is always important that no iodine as Lugols solution or in any other form be given for three or four weeks previously. Otherwise the thyroid may retain less than the 75 to 80 per cent of the radioactive iodine which it usually attracts, with consequent danger to the kidneys because of rapid excretion of the radioactive isotope.

Of course, the whole problem in radiation therapy has always been to have the radiation affect the tumor tissue, while the normal tissue was not too severely damaged. If we can find the chemical which will concentrate sufficiently more in malignant tissue than in normal tissue, it should not be difficult to find an appropriate isotope with a suitable half life and energy value to destroy the malignancy.

Research is being done in an effort to develop one of the azur dyes which will be selectively absorbed by tumor tissue. If this proves to be possible, boron could be incorporated with such a dye, after which the region could be irradiated with slow neutrons. This type of irradiation would cause the boron nucleus to disintegrate, and thus to form numerous Alpha particles which, though short-lived, have a very intense ionization path, and which, if already located in the tumor tissue, would be extremely destructive to it. Attempts are being made to link radioactive isotopes to amino acids or to sex hormones with the same idea of getting enough radiation at the right time and right place to produce a cancericidal effect.

When it comes to using radioactive isotopes as tracers, the possibilities seem endless. With them biologists and physiologists are learning about the major metabolic processes concerning the synthesis of fats, proteins and carbohydrates. Even the molecules used in insecticides can be tagged and the insects' viscera later analyzed to find out which part of the molecule has done the work. Radioactive sodium can be used to determine the patency of

arteries and the distribution of body fluids. Penicillin in an aerosol distributed by means of a nebulizer can be checked by this method to see if it reaches the periphery of the lungs. (It does.)

Recently a surgical Geiger counter has been developed for use during thyroidectomies, particularly those in which any sort of aberrant tissue is anticipated or has been previously demonstrated by tracer study. With such a simple tool the surgeon can make certain that he does not leave behind any intrathoracic extensions, or, in the case of thyroid carcinoma, any involved glands in the cervical lymph chain.

Another new development which may prove to be of great future importance in radiation therapy is the Betatron. This machine operates at voltages as high as 100 million and pours out a stream of Beta particles (electrons), which theoretically can be regulated by changing the voltage so that most of the ionization will be absorbed at a predetermined depth at which the cancer is located. Under these circumstances there should be very little effect on the skin or other normal tissues.

Extremely short wave length x-radiation such as is generated by 100 million volts results in three to twelve times as much ionization beneath the skin as is received on the skin surface. Since the possibility of skin damage is always a limiting factor in irradiation by x-rays, further research with these extremely high voltages may prove fruitful.

With the larger amounts of radium which are now available, one of the decomposition products of radium—Radium D—can be obtained in applicator form. Radium D has the great advantage that it gives off pure Beta rays which are relatively non-penetrating. Thus we can treat such ophthalmic diseases as vernal catarrh, corneal ulcers, recurrent pterygium, and interstitial keratitis without fear of damaging the underlying lens, for the effective penetration of Radium D is less than 3 mm.

So long as the new forms of radiant energy are directed in small amounts to the cure of the diseases of man, we may be grateful for their discovery.

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QUESTIONS AND ANSWERS

Question: Dr. Bailey, what should be done to render left-over radioactive isotope materials safe to personnel?

Answer: The chief answer is to treat such material with great respect. Human beings can tolerate a certain amount of radiation. We all get continuous radiation from the cosmic rays of the sun, and from experience we know that small daily doses of radiation can be tolerated. In order that such doses shall not be exceeded, however, radioactive materials must be carefully shielded in lead, and laboratories where they are used should have a Geiger counter available so that spillage or possible leakage can be checked with regularity.

The article on What's New in Dermatology, by Henry E. Michelson, M.D., Minneapolis, which was read as a part of the "What's New" panel discussion, has not been received. It is scheduled for publication in a later issue of *California Medicine.*

Syphilis in Pregnancy

Charles W. Barnett, M.D., and John M. Read, *San Francisco*

THE importance of syphilis in the mother during pregnancy has been emphasized repeatedly, particularly in regard to its effect upon the status of the child. This emphasis has been carried, in fact, almost to the point of a phobia as is shown by the widespread use of such terms as "disastrous outcome" or "syphilitic tragedy" when a child is stillborn or has syphilis, and "salvaged baby" when it is normal. It is reasonable to suppose that an investigator who uses such terms will be unlikely to view his data with critical and unbiased judgment and one is inclined to regard his conclusions with suspicion.

Most of the reports on the outcome of pregnancy in women with syphilis have come from obstetrical services and in nearly all there is lacking a clear explanation of the means by which a diagnosis of syphilis is established in the mother or the child. In mothers, the diagnosis usually depends on the serologic tests but reports rarely state whether the tests are strongly positive or whether they are regularly confirmed before treatment. In infants, the diagnosis is usually said to be based upon serologic tests, roentgenograms of the long bones, examination of the placenta and clinical observation of the child, but never is the exact role of these various factors specified. In most cases the diagnosis of syphilis seems to have been made as a result of positive serologic tests on the child at some specified time, usually one or two months, after birth, although it has been pointed out repeatedly that only by serial quantitative tests can the diagnosis be made with assurance, in the absence of clinical signs. We believe that many of the previous reports on this subject are unduly pessimistic in their attitude toward the effect of syphilis on the outcome of pregnancy, and the series of cases to be presented supports this belief.

This report is based upon the records of a group of patients from the Syphilis Clinic of the Stanford University School of Medicine. Three hundred and forty-one babies were born to 243 mothers during a period of a little over 15 years. One hundred and fifty-five of the mothers and 232 of the infants were white and the rest were negro. One hundred and eighty-five of the infants were male. Subdivision of the series according to race or sex of child revealed no significant differences and therefore the series is considered as a whole.

This clinical material differs in some respects from that presented by previous investigators. It was collected through the diagnosis file of the syphilis clinic and no patients who were not examined in that clinic are included. Deliveries that occurred prior to the registration of the mother in the syphilis clinic are not indexed and consequently almost no cases are included in which syphilis was not discovered until the time of delivery. The result is that we have very little completely untreated syphilis and a larger number of adequately treated cases, particularly among those treated before pregnancy, since many of our treated patients return to the clinic for subsequent prenatal care and delivery.

For patients who are receiving prenatal care, the obstetrical service sets up separate records which eventually get into the history but are not available during pregnancy. When abortion is threatened or when the child is known to have died in utero, the patient is frequently transferred to the San Francisco Hospital, and the Syphilis Clinic then has great difficulty in discovering the outcome, particularly with respect to whether or not the product of conception was examined and whether or not it showed evidence of syphilis. As a result, our figures on the incidence of abortion and stillbirth are quite incomplete and we have eliminated them entirely except for a few cases in which careful autopsies have been performed. In these circumstances, the child is classified as syphilitic if evidence of the disease is found, and as non-syphilitic if careful examination and spirochete stains show no evidence of the infection and there is sufficient reason for fetal death otherwise. Two such cases are included in the data on syphilitic infants and two among the non-syphilitic.

The role of syphilis in the production of abortion and stillbirth is somewhat uncertain. There is no doubt that the infection is responsible for a great many such terminations of pregnancy, but the custom of assigning all these accidents to syphilis when they occur in women who have the disease is to be deplored, since women who do not have syphilis also have abortions and stillbirths in appreciable numbers. In various reports on syphilis in pregnancy, the incidence varies widely. Thus Halloran [3] reports 12.5 per cent, McKelvey and Turner [7] 45.9 per cent, and McCord [6] 66.4 per cent of such terminations in mothers who have had no anti-syphilitic therapy. Both of the last two note a drop in this proportion to slightly over 10 per cent after extremely small amounts of treatment in the last few weeks of pregnancy. Such figures are distinctly misleading. Most syphilitic stillbirths occur from the sixth to the eighth month as a result of premature fetal death and it is much more probable that women who have entered the last month of pregnancy have somehow evaded the danger of fetal death, than that they have been saved from it by an insignificant amount of last-minute therapy.

We feel that the elimination of stillbirths from the data does not detract from the value of this study. A pregnancy that ends without a living child is an unpleasant experience for the mother that by no means approaches the distress that is caused by a

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Read before the Section on Dermatology and Syphilology at the Annual Session of the California Medical Association in Los Angeles, April 30-May 3, 1947.

living but chronically ill or defective child. We are primarily interested in the child that is born alive and we cannot subscribe to the use of such terms as "disastrous outcome" for those who do not survive the fetal period.

When an infant is born alive to a syphilitic mother, it may have some clinical evidence of syphilis at the time of birth or soon afterward, such as a skin eruption with positive darkfield, treponema pallidum in the umbilical cord or definite roentgenographic evidence of syphilis in the bones. In these circumstances, the diagnosis of congenital syphilis can usually be made promptly. When no clinical evidence of infection exists, the tests of blood from the cord may be positive or negative and in either case the diagnosis must be postponed, pending a period of further observation.

In recent years, roentenogram of the long bones, formerly considered an essential procedure in diagnosis, has fallen into some disrepute. In many infants with syphilis, the bones are normal, while in some normal infants confusing bone changes occur that make a diagnosis on this basis somewhat uncertain (Dill,[2] Ingraham.[4] Miller[8]). Examination of the placenta has also been shown to be of relatively little value in diagnosis.[2,8] Neither of these methods has been employed regularly in the present series. Many of the placentas were examined but rarely were any changes found that seemed to be of diagnostic significance.

The proof of syphilis in the infant depends, therefore, on clinical evidence of the disease at birth or during the first few weeks of life, or on tests on cord blood and on the blood of the infant, examined at intervals during its early life. These tests should be carried out by some quantitative procedure that permits a measure of the trend of the titer, and the diagnosis should never depend upon the persistence of a positive qualitative test for an arbitrarily selected period of time. The infants in this series were considered on this basis and the means by which the diagnoses were made will be explained. The children were examined, tested and treated by physicians in the Department of Pediatrics, and, although the follow-up was not always as thorough as it might have been, we believe it is possible to separate the syphilitic from the non-syphilitic infants with a considerable degree of certainty, as will be shown.

Two infants were stillborn and macerated and autopsy showed both to be infected heavily with treponema pallidum. These were the only cases in which an immediate clinical diagnosis of syphilis could be made. In three others darkfield positive lesions appeared in six weeks or less, with a rising serologic titer in the blood. In one of these there was a negative reaction in the cord blood, but the child's blood was weakly positive at five days and rapidly became strongly positive. In two more, a rising titer in the blood plus roentgenographic evidence of periostitis led to a diagnosis and in a third the roentgenographic evidence was supported by a moderately high but constant serologic titer.

In two cases the diagnosis was made on results of blood tests alone. One infant had a titer of 64 units at birth which remained constant for two months and went up to 256 in the third month. The other started with a titer of 10 units, which increased to 100 units at five weeks when treatment was started. No clinical evidence of syphilis developed in either of these children and they were not apparently injured by the delay in starting treatment. Altogether, there were ten infants in whom a definite diagnosis of congenital syphilis could be established.

In 107 infants, the cord blood was either strongly or partially positive, but the blood of the infant became negative without treatment. There were no recurrences. Sixty-five were followed for more than three months and 31 for over a year, and in no instance did any suspicious evidence of syphilis appear. Only seven were lost from observation in the first month, the others having been followed for a period of time that was sufficient to establish the diagnosis in most of the known syphilitics. There is no reason to suppose that any of these infants had syphilis.

There were 95 infants with negative cord blood reactions that were followed with repeated blood tests for various periods of time, 27 of them for more than a year. In none of them did any clinical or serologic evidence of syphilis appear. Another 99 apparently normal infants were born with negative cord blood reactions but had no further blood tests. Most of these infants had repeated physical examinations and quite adequate clinical follow-up, 75 for more than three months and 41 for more than a year. None developed anything to suggest syphilis and we consider them as uninfected since, with the one exception previously noted, we have never seen a child with a negative reaction in the cord blood develop congenital syphilis and most authorities concede that it is rare.

Another group consists of 30 infants originally diagnosed as having congenital syphilis (for which they were treated) on what appears to be completely inadequate evidence. They were treated prior to 1935 at a time when the urge to treat syphilis on the slightest provocation was exceptionally high. One was treated on the day of birth because of a skin eruption which was not darkfield positive. The results of blood tests were repeatedly negative and the child remained well except for chronic eczema through an observation period of nine years although the antisyphilitic therapy had been totally inadequate. In 11 cases the serologic tests were never stronger than doubtful. In 17 they were positive at birth but in no case was treatment delayed for more than five weeks for confirmation of the tests. In one case the cord blood reaction was positive, but tests of the infant's blood were doubtful at one month and almost negative at two, in spite of which treatment was administered. In no case was there ever any evidence of syphilis other than the serologic tests, in no case was a positive reaction obtained after treatment had been started, and no quantitative tests were performed.

According to Moore,[9] the minimum adequate treatment for early congenital syphilis should com-

prise 32 injections of mapharsen and 32 of bismuth over a period of one year. By this standard, all these patients were undertreated. Only one received adequate arsenical therapy and three adequate heavy metal. In the rest the total treatment was not over half of the required minimum and in only four was it continued for as long as a year.

Twenty-six of these 30 patients were followed for from one to 17 years with an average period of serologic observation of 5.2 years and of clinical observation of 7.3 years. Spinal fluid tests of most of them gave negative results. In none did any evidence of syphilis develop in spite of the inadequate treatment, and we submit that they did not have syphilis at all. The entire group has been included in the non-syphilitic classification, although if they should be discarded from the series, it would not change the results appreciably.

Of the four infants followed for less than a year, two were transferred for treatment to private physicians as soon as the Wassermann tests were found to be positive for syphilis, and they were not followed. The other two were treated, and both died, one at three weeks and the other at seven weeks, of hemorrhagic encephalitis as a result of sulpharsphenamine injections given for syphilitic infections they probably never had.

In the mothers, the diagnosis of syphilis was made on the basis of history, physical findings and blood tests. When it was necessary to make a diagnosis on blood tests alone, the tests were always repeated at least once if the first was strongly positive and several times over a period of several weeks if doubtfully positive. We have never felt that the requirements for a definite diagnosis of syphilis should be altered because of pregnancy or that treatment should be started until a reasonably certain diagnosis had been made. After this study we are more than ever convinced of the propriety of this viewpoint.

The status of the infant according to the time when the mother was treated is shown in Table 1.

TABLE 1.—*Outcome of Treatment According to Time of Treatment of Mother*

Treatment	Outcome	
	Syphilitic	Non-syphilitic
None	5	17
During pregnancy	5	96
Before pregnancy	0	98
Before and during pregnancy	0	120

It should be noted that none of the ten syphilitic infants were born of mothers who had received treatment prior to pregnancy.

The outcome in all women who received no antisyphilitic therapy before the start of pregnancy is summarized in Table 2, according to the number of injections of trivalent arsenic that were given during pregnancy. In nearly every case a corresponding number of injections of bismuth was given in addition. Bismuth alone and penicillin were given to a few patients as noted.

TABLE 2.—*Outcome of Pregnancy According to the Amount of Treatment Given During Pregnancy to Patients Who Had Had None Before*

Treatment	Outcome	
	Syphilitic	Non-syphilitic
None	5	17
Bismuth only	1	3
Injections of arsenic:		
1 - 4	1	14
5 - 9	2	31
10 - 14	1	19
15 or over	0	17
Penicillin	0	12
Total	10	113

From Table 2 it is evident that only a moderate amount of therapy is required to prevent the transmission of syphilis to the infant, since in only one instance was the child infected when the mother was given more than ten injections of arsenic.

All the pregnancies not included in Table 2 were preceded by antisyphilitic therapy. The amount of this treatment together with the outcome is shown in Table 3. Some of these mothers received additional treatment during pregnancy but this had no apparent effect upon the results of the previous therapy.

TABLE 3.—*Outcome of Pregnancy According to the Amount of Treatment Given Before Pregnancy*

Treatment	Outcome	
	Syphilitic	Non-syphilitic
Bismuth only	0	2
Injections of arsenic:		
1 - 9	0	33
10 - 19	0	50
20 - 29	0	45
30 - 39	0	36
40 or over	0	43
Penicillin	0	9
Total	0	218

Although most of these women had received considerable amounts of therapy, it is evident that even small amounts afford a considerable degree of protection if given prior to conception, since 35 pregnancies were preceded by fewer than ten doses of arsenic and an additional 50 had fewer than the standard 20 doses without a single syphilitic baby as a result.

In addition to the amount of treatment administered to the syphilitic mother, there are two other important factors to be taken into consideration. These are the stage of pregnancy in which treatment is started and the duration of the infection in the mother. In all five cases in which a syphilitic child was born after treatment, the infection in the mother was not discovered until the last trimester when the fetus is already infected and treatment necessarily less effective.

The effect of the duration of the infection on the outcome is difficult to determine because of the uncertainty that exists as to the onset of syphilis in most women. In 154 of the cases in this series, there was no clue to the duration whatever. In 96 it was

known to be in excess of four years but the date of onset was frequently lacking, and in 59 it was of less than 4 years' duration. Thirty-two mothers had congenital syphilis. Among the infants who had syphilis, delivery occurred when the infection in the mother was early in five and when the time of infection was unknown, but probably recent, in four. In one case the mother had quite definite stigmata of prenatal syphilis, in spite of which, tests of the child's blood showed positive reactions, with a rising titer and a positive darkfield from the nasal secretions. This mother was untreated and this was the only case observed in which the infection in a late stage in the mother was transmitted to the child.

In 59 pregnancies, the infection in the mother at the time of delivery was known to be early, that is, of less than four years' duration. Although the number is small, the outcome of pregnancy in relation to treatment is of interest and is summarized in Table 4.

TABLE 4.—*Outcome of Pregnancy in Patients With Early Syphilis at the Time of Delivery According to the Time and Amount of Treatment*

Treatment	Outcome	
	Syphilitic	Non-syphilitic
None	2	3
During pregnancy:		
Arsenic, 1 - 9 doses	2	10
10 or more doses	1	11
Penicillin	0	11
Before pregnancy:		
Arsenic, 10 - 19 doses	0	6
20 or more doses	0	6
Penicillin	0	7
Total	5	54

Even with very little treatment, it is not unusual for a woman with early syphilis to give birth to a normal child. This occurred in 13 of 17 patients who were given fewer than ten injections of arsenic during pregnancy. More than this amount of therapy gave almost complete protection against congenital transmission, the single failure in the higher treatment group having been in the case of a mother who had had just ten doses of mapharsen and five of bismuth. The principal period of danger to the infant is certainly when the mother has early syphilis at delivery, but even then transmission is not a certainty, and it may be prevented by relatively small amounts of treatment.

Penicillin given either before or during pregnancy never failed to protect the child from syphilis. In several cases it was given in the last month of pregnancy and in several the total dose was only 300,000 units. This result is in complete agreement with the findings of other observers (Ingraham[5]).

The status of the mother's blood at the time of delivery with regard to reactions to tests for syphilis, is often cited as a factor in determining the transmission of syphilis to the infant. To a limited extent this is true in that a woman who is seronegative at delivery seldom has a syphilitic child. On the other hand it is common for a seropositive woman also to have a normal child. In the ten pregnancies in our series that resulted in syphilitic infants, the reaction of the mother's blood to tests for syphilis was known in nine cases: It was positive in eight and doubtful in one. The comparative results of tests of the mother's blood and of blood from the cord in all pregnancies in which the reaction of the mother's blood was known are given in Table 5. The tests of the mother's blood were not always done at exactly the time of delivery, but were never more than two months away.

TABLE 5.—*Results of Tests on Cord Blood in Relation to Mother's Blood at Approximate Time of Delivery*

Mother's Blood	Number	Cord Blood	
		Positive	Negative
Positive	163	65 (40%)	98 (60%)
Negative	150	21 (14%)	129 (86%)

It will be seen that the infant's blood is much more likely to show positive reaction if the mother's does. However, there is no complete agreement between them, and the diagnosis in the child should be made without regard to the status of the mother.

DISCUSSION

In an inquiry into the effect of syphilis in the mother upon the offspring, the most important single consideration is the accuracy of diagnosis in the child. It has been customary to assume that every abortion or stillbirth that terminates a pregnancy in a patient with syphilis is due to the infection. This is a grossly misleading custom and should be abandoned. If an autopsy shows syphilis in the fetus, the termination may be ascribed to syphilis. If no evidence of the disease is found on careful examination, the infection should not be blamed. If the fetus has not been examined, the case should be excluded from consideration.

When an infant is born alive to a mother with syphilis, a diagnosis of syphilis is justified in the child only when there develops some clinical evidence of syphilis or when serial tests of the blood by a quantitative method show a rising reagin titer. The persistence of a positive qualitative reaction for an arbitrary period of time such as one or two months does not justify a diagnosis of syphilis.

On the basis of our experience, we believe that the danger of transmitting syphilis from mother to child during pregnancy is less than it has generally been considered to be. Only 10 of 341 infants were proved to have syphilis, and these were born of mothers who had had no treatment, or very little, and in all but one of whom the infection at the time of delivery was either definitely or probably early.

In no case in which the mother had received antisyphilitic therapy prior to conception was the infection transmitted to the child. This and similar observations by other observers[7] lead us to disagree sharply with the dictum of the Cooperative Clinical Group (Cole and his co-workers[1]), that "The safer procedure then for every mother who has or ever has had syphilis is to take antisyphilitic treatment throughout each pregnancy."

This policy is absolutely unjustified, since it adds a definite risk and considerable inconvenience and discomfort to pregnancy without demonstrable benefit. Since penicillin is harmless and very effective, one might be justified in using it in these circumstances but it should not be insisted upon if the mother has had a reasonable amount of previous treatment.

When the infection in the mother is early or when she has been untreated before pregnancy, antisyphilitic therapy should always be given, starting as early as possible after gestation, but never unless a definite diagnosis of syphilis can be established. Much more harm can be done by giving treatment on suspicion, thereby permanently preventing proper diagnosis, than is likely to occur if a patient in whom the existence of the disease is questionable is left untreated. Since penicillin is both safe and effective in early congenital infections, a great deal of the hazard of prental syphilis is now removed and one is entitled to take somewhat greater chances with the outcome in the infant to the benefit of the mother than was justified before penicillin was available.

SUMMARY

1. The outcome of 341 pregnancies in 243 mothers with syphilis is reported, according to the time and amount of treatment that the mother received.

2. Only ten infants were found to be infected, none as a result of a pregnancy that had been preceded by treatment.

3. The diagnosis of syphilis in mother and child is discussed together with some factors that affect the outcome.

4. It is concluded that the hazards of syphilis in pregnancy are not as great as they are usually considered to be if the diagnosis of syphilis in the infant is carefully made.

REFERENCES

1. Cole, Harold N., et al.: Syphilis in pregnancy. Cooperative clinical studies in the treatment of syphilis. Reprint No. 46 from Venereal Disease Information, Vol. 17, No. 2 (Feb.), 1936, p. 6.

2. Dill, L. V., Stander, H. J., and Isenhour, C. E.: An evaluation of the effect of antenatal antisyphilitic therapy on fetal mortality and on congenital syphilis, Am. J. Obs. and Gyn., 40:965 (Dec.), 1940.

3. Halloran, Chris R.: A review of the records of syphilitic pregnant women treated at the Los Angeles maternity service over a two-year period, Am. J. Obs. and Gyn., 38:135 (July), 1939.

4. Ingraham, N. R., Shaffer, B., Spence, B. E., and Gordon, J. H.: The adequate diagnosis of infant congenital syphilis, Arch. Derm. and Syph., 43:323 (Feb.), 1941.

5. Ingraham, N. R., Rose, E. K., Beerman, H., Wammock, V. S., Stokes, J. H., and Gyorgy, P.: Treatment of the syphilitic pregnant woman with penicillin in oil beeswax: A comparison of results obtained using aqueous sodium penicillin, to be published.

6. McCord, James R.: Prenatal treatment of syphilis. Some results of antisyphilitic treatment in a series of 519 pregnant syphilitic colored women, Am. J. Syph., 16:78 (Jan.), 1932.

7. McKelvey, J. L., and Turner, T. B.: Syphilis and pregnancy. An analysis of the outcome of pregnancy in relation to treatment in 943 cases, J.A.M.A., 102:503 (Feb. 17), 1934.

8. Miller, Kate Freeman: The effect of syphilis on the pregnant woman and her offspring, Med. Rec., 157:345 (June), 1944.

9. Moore, Joseph Earle: The modern treatment of syphilis; Charles C. Thomas, Second edition, second printing, p. 506.

Discussion by A. Fletcher Hall, M.D.

I am sure that we all welcome this timely blast from one of syphilology's outstanding iconoclasts. As a matter of fact he is not the first to cite cases in support of the stand which he has taken, although he is the first, so far as I know, to advocate such radical conclusions.

As early as 1927 Birnbaum reported that 21 women presumably cured of syphilis gave birth to 34 normal infants but no syphilitics; in 1934, Cole, reporting the material of the Clinical Cooperative Group, added 54 adequately treated syphilitic women who gave birth to no syphilitic children in pregnancies subsequent to their treatment; in the same year, McKelvey and Turner, reporting on the material at Johns Hopkins Hospital, stated that 59 syphilitic women receiving a minimum of 1 gm. of arsphenamine (three or four treatments) before pregnancy, gave birth to only healthy infants, while those who received no treatment before pregnancy required four to five times as much during pregnancy to prevent the appearance of syphilis in their offspring. These findings parallel those reported to us in Dr. Barnett's paper. Findlay in 1942, commenting on his experience with syphilitic women adequately treated before pregnancy, stated, "It is difficult to understand how most writers recommend that further courses of salvarsan therapy should be carried out through any succeeding pregnancy."

Although all of the preceding quotations are taken from Stokes, "Modern Clinical Syphilology," Third Edition (1944), that author states as his opinion in the same text, "Conservative opinion suggests that with our present-day knowledge, a syphilitic woman should be treated through every pregnancy, regardless of the duration of her infection, her serologic status, or the amount or type of antecedent therapy." Moore (in 1943: "The Modern Treatment of Syphilis," Second Edition) quotes McKelvey and Turner's and the Cooperative Clinical Groups' figures as listed above, and agrees with the former that thorough treatment of the maternal syphilis *prior* to pregnancy, i.e., not less than four gm. of arsphenamine with appropriate heavy metal, probably affords adequate protection of the offspring in subsequent pregnancies even though treatment during the pregnancy is omitted." He further states that, "They feel, however, that if the maternal serologic test remains positive, or if there is clinical evidence of persistent infection, it seems wise to treat the mothers during pregnancy, regardless of the amount of previous treatment." Moore does not comment on this last quotation.

Stokes and Moore are undoubtedly the most referred to authorities on the conduct of the treatment of syphilis, and rightly so because there is certainly no more comprehensive and dependable compendium of information in this field than either of these texts represents. It is to be hoped that future editions will carry the material presented in Dr. Barnett's present paper, giving appropriate weight to his conclusions.

It is only by giving such weight to the findings reported in this excellent paper, and those previously reported, that we who treat syphilis, whether we be "specialists" or general practitioners, will dare to stop subjecting pregnant syphilitic women to unnecessary and dangerous treatment, just as a sop to our own perhaps too zealously guarded peace of mind.

The Incidence of Unsuspected Urinary Tract Infection in a Selected Group of Ambulatory Women

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A PREVIOUS study conducted in the Stanford University Hospitals demonstrated that unsuspected urinary tract infections were common in females who had been hospitalized for various unrelated disorders. The present report describes the results of a similar investigation among ambulatory females attending the Out-Patient Clinics of Stanford University Hospitals.

It is of interest to note that there are few recorded studies of this nature,[1,4,6] although the sequelae of smouldering untreated urinary tract infections has been discussed at great length in the literature. Particular reference is made to chronic pyelonephritis, which often leads to the development of arterial hypertension or renal failure. Longcope[4] states: "It should be possible to recognize this form of renal disease long before the critical stage of kidney destruction has been reached. By doing so, one might hope through proper treatment to retard its progress or to arrest it altogether." The purpose of this study was to determine the frequency of unsuspected urinary tract infection. No detailed discussion of therapy will be undertaken.

CLINICAL MATERIAL

One hundred and twelve women were selected for this study from the patients in the gynecological outpatient clinic of Stanford University Hospitals. All subjects were from 17 to 43 years of age (Table 1). A past history of possible urinary tract infection was obtained in 20. Eleven were in the first trimester of a pregnancy and ten were approximately six weeks post partum. Additional information as to the primary reason for clinic attendance by these patients is summarized in Table 2.

Table 1.—*Age Distribution of Study Group* (Range 17 to 43 years)

Age Group	No. of Patients	Per cent of Total
Below 20 years	4	3.6
20 to 30 years	76	67.8
30 to 40 years	29	25.8
Over 40 years	3	2.6

A complete history was obtained and physical examination done in all cases selected for study. Laboratory investigation included the culture of urine collected by catheter and such other procedures as were indicated.

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The authors are grateful for the assistance of many members of the Gynecological and Medical House Staffs of Stanford University Hospitals.

Table 2.—*Reason for Clinic Visit of Patients in Study Group*

Reason for Clinic Visit	Number	Per cent of Total
1. Prenatal cases, 1st trimeter	11	10.0
2. Postpartum (6 weeks) routine examination	10	9.0
3. Contraceptive advice	6	5.4
4. Referred as gonorrhea contact	7	6.6
5. Referred from other clinics for varied complaints including primarily low back pain, abdominal pain, hot flushes, etc.	24	21.3
6. Primary gynecological disease:		
a. Chronic pelvic inflammitis	6	
b. Chronic cervicitis, vaginitis	11	
c. Metrorrhagia, menorrhagia	8	
d. Possible pregnancy	7	
e. Other	21	46.8
7. Diabetes, mild	1	0.8

METHODS

A. *Collection of Urine Specimens.* All specimens were collected aseptically by catheterization in the usual manner, either by the senior author or by the attending nursing staff under his supervision. Specimens were then examined and cultured with minimal delay.

B. *Method of Culture.* The following technique was used: 0.5 cc. of urine was transferred aseptically to 10 cc. of peptic digest broth containing 0.8 cc. of horse blood, and 0.1 cc. of urine to the surface of each of two blood agar plates and one eosin methylene blue agar plate. One blood agar plate was placed in the anaerobic jar. All inoculated media were examined after 24 and 48 hours of incubation at 37° C. The isolated organisms were identified by the usual bacteriological methods. No organisms were recovered in anaerobic preparations that failed to grow aerobically. All urines containing large numbers of bacteria were studied by the usual microscopic and chemical methods.

CLASSIFICATION OF RESULTS

The patient was not thought to have a significant urinary tract infection and no further studies were done if the first urine contained less than 200 colonies of bacteria per cc. This classification was an arbitrary one and was based on past experience.

Another catheterized urine specimen was secured at one, two or three week intervals when more than 200 bacteria per cc. were present on the first examination. If the second specimen was also positive, cystoscopy was done with collection of urine from both ureters. The patients were not investigated further if the second specimen was sterile, since a transient bacilluria of little clinical significance presumably had been discovered.

NEGATIVE CASES

The urine obtained from 104 patients showed minimal growth of bacteria or was sterile. None of these patients had any present complaints referable to the urinary tract. Historical evidence of urinary tract disorder was obtained in 20 (20.1 per cent) of these uninfected individuals. The nature of their past complaints is summarized in Table 3.

TABLE 3.—*Cases with Past History of Possible Urinary Tract Disease*

Case No.	Past history of urinary tract episode
2	Dysuria, frequency, positive urine culture one year ago.
3	Passed calculus with hematuria, burning, pain, 1944; frequency and burning, 1945.
14	"Sore on kidney wall," 1943.
20	Mild burning one month ago.
21	Burning following pessary insertion two weeks prior to visit.
23	Urgency, frequency nine months ago.
24	Urgency, one week ago, slight.
26	Nocturia, slight, two weeks ago.
29	Burning one year ago.
30	Dysuria with pregnancy one year ago.
37	"Cold in bladder," 1937.
64	Possible infection, 1942, with hematuria.
66	Urgency for two days in 1945.
69	Frequency and slight dysuria, 1946.
71	Possible kidney infection, 1937.
84	Recent urgency and nocturia.
92	Possible urgency and frequency in past.
96	Urgency, frequency, 1946.
102	Toxemia of pregnancy, 1937.
110	Dysuria, slight, two months prior to first visit.

Pelvic examination was performed in over 90 per cent of these patients. It was not remarkable in 65 per cent and revealed minor abnormalities in the remaining 35 per cent. For the sake of brevity these are not summarized, but the pelvic findings in the patients whose urine showed large numbers of organisms will be mentioned later.

POSITIVE CASES

Cultures of the first catheterized urine specimen from eight patients revealed the growth of large numbers of organisms. Bacteria and moderate numbers of pus cells were demonstrated in the urinary sediments. Routine tests for sugar and albumin were invariably negative. Two of these individuals had sterile urines on repeated culture and one did not return for subsequent examinations. Five patients remained who were studied thoroughly. Their records are summarized briefly below.

CASE REPORTS

CASE 1.—The patient was a 36-year-old housewife, gravida O, para O. She first visited the gynecological clinic on 17 July 1947 complaining of darting cramps across the mid-abdomen. The past history was negative. Pelvic examination showed slight cystocele and rectocele. The general physical examination was not remarkable, and the blood pressure was 110 mm. systolic, 60 mm. diastolic. The first and second bladder urine specimens showed a heavy growth of staphylococcus aureus, coagulase negative. Cystoscopy was done and slight inflammation of the trigone of the bladder was discovered. Two thousand colonies per cc. of staphylococcus aureus, coagulase negative, were isolated from urine obtained from the right ureter. Moderate numbers of bacteria and a few pus cells were seen in the centrifuged sediments of urine from the bladder and the right ureter. Intravenous pyelograms revealed fuzziness of the right kidney and pelvis, and inflammatory disease of the right middle calyx, which was compatible with the presence of chronic pyelonephritis. The patient received combisol (0.016 gm. sulfadiazine and 0.017 gm. sulfamerazine) 0.5 gm. four times a day for ten days. At the end of that time the bladder and ureteral cultures were sterile.

CASE 2.—The patient was a 28 year old negro housewife, gravida I, para II. Past hospital history revealed hospitalization on 18 June 1947 for a primipara pregnancy with normal spontaneous delivery and no complications. The patient first visited the gynecological clinic on 31 July 1947 for a routine post-partum examination. There were then no specific complaints. The pelvic and general physical examinations were not remarkable. The blood pressure was 110 mm. systolic, 90 mm. diastolic. The first and second urine specimens showed a heavy growth of paracolon bacilli, highly resistant to streptomycin. Upon cystoscopy within one week, sterile urine was found in both ureters. The urine sediment showed many bacteria, a few epithelial and white blood cells. Intravenous pyelograms showed moderate ptosis of the right kidney and no other abnormalities. The patient was given combisol, 0.5 gm. four times a day for two weeks. Subsequent urine specimens were sterile.

CASE 3.—The patient was a 30-year-old negro woman, gravida II, para II, was examined in the chest clinic on 24 April 1947 on suspicion of active pulmonary tuberculosis. This diagnosis was not confirmed by subsequent study. The patient's first visit to the gynecological clinic was on 2 June 1947, at which time she thought she was pregnant. Examination showed only a third degree uterine retroversion. The second visit was on 4 August 1947, the patient complaining of lower abdominal pain, which was believed to be caused by a subacute pelvic inflammatory disease. This condition resolved within a short period. There was never any complaint of urinary tract disease. The general physical examination showed a blood pressure of 130 mm. systolic and 90 mm. diastolic, and was otherwise without note. The urinary sediment from the bladder and ureters showed many bacteria and a few white blood cells. The first and second bladder urine specimens revealed, upon culture, a heavy growth of Escherichia coli. Cystoscopy disclosed a mild trigonitis and posterior urethritis. Urine from the right ureter contained 60, and that from the left ureter 260, coliform organisms per cc. Intravenous pyelograms showed only slight dilation of the superior calyx of the right kidney. The patient was given 0.5 gm. of streptomycin intramuscularly once daily for five days. Urine specimens taken one week and then one month following this therapy were sterile.

CASE 4.—The patient was a 24-year-old negro, gravida O, para O. Her first visit to the gynecological clinic was on 1 July 1947 on suspicion of gonococcal infection. Subsequent examinations showed she did not have this disease. There were no complaints of urinary tract disease at any time. The first urine specimen showed a heavy growth of staphylococcus albus, coagulase negative; the second, a large number of the same organisms and a few E. coli. Specimens obtained from both ureters were sterile. Moderate numbers of bacteria but no pus cells were seen in the urinary sediment. No abnormalities were noted upon cystoscopy. Intravenous pyelograms were not obtained. The final urine specimen was sterile after combisol had been administered for two weeks.

CASE 5.—The patient, a 37-year-old negro, gravida O, para O, first visited the gynecological clinic on 8 July 1947, complaining of dysmenorrhea and headaches. There were no complaints of urinary tract disease at any time. Pelvic examination showed moderate retroversion of the uterus, and a small cervical polyp was found and removed. The blood pressure was 120 mm. systolic, 85 mm. diastolic. The general physical examination was otherwise not remarkable except for the presence of an apical systolic cardiac murmur.

The first and second catheterized urine specimens showed a heavy growth of staphylococcus albus, coagulase negative. The third specimen, including urine from the bladder and both ureters, showed growth of the same organism, 380 organisms per cc. being recovered from the right ureter and 1,500 from the left. The sediments of urine from both ureters contained moderate numbers of bacteria and a few pus cells. Cystoscopy revealed inflammation of the trigone with encrustations on the bladder mucosa, and a diagnosis of cystitis and trigonitis was made. Intravenous pyelograms were reported to show no calculi or ptosis. Drainage was somewhat inhibited on both sides and a moderate residium of dye remained after evacuation. Combisol was given, 1 gm. three times a day for ten days. Urine specimens at the end of that time were sterile.

DISCUSSION

Unsuspected urinary tract infection was discovered in 4.4 per cent of a group of 112 ambulatory women. This is an incidence only slightly less than that found by post mortem examinations done at the Stanford University Hospitals for the years 1940-1941. Twelve cases of chronic unilateral or bilateral pyelonephritis were discovered in 252 examinations of women who had had no known history of urinary tract infection during life and in whom the cause of death was entirely unrelated to the genito-urinary findings at autopsy.

The large number of patients who had had symptoms of urinary tract disease in the past but who had negative urine cultures at the time of this study, confirms the impression that single symptoms such as nocturia, frequency or dysuria, do not definitely indicate the presence of infection of the urinary passages. These symptoms are highly subjective in nature and can arise from any pelvic or lower abdominal disorder[3] but, when present, should focus attention on the urinary tract and surrounding structures.

That there were five patients in the group whose urine contained infecting organisms shows that a severe urinary tract infection may exist in the absence of specific symptoms. It is interesting and highly significant that in one case there was definite roentgenological evidence of kidney damage, consistent with chronic pyelonephritis. The infections in all these patients had been present for a relatively short time; there was no systemic evidence of renal disease. The blood pressure was always normal, and albuminuria and cylindruria were never discovered. Kidney function tests were omitted as it is doubtful that they would have contributed any important information.

It is obvious that minor and vague urinary and lower abdominal symptoms do not correlate well with the actual presence of infection of the kidneys and bladder. This makes diagnosis of such disorders difficult if not impossible on the basis of clinical findings in the absence of laboratory reports. The fact that the existence of pyelonephritis may be totally unsuspected is even more striking and more significant.[2]

It was again found in this study, as in a former one,[5] that there was no relationship between pelvic disease and the presence of urinary infection. It has been commonly assumed that Bartholin cyst abscesses, endocervicitis, vaginitis, and cervical polyps are frequently associated with cystitis, trigonitis or urethritis, but the experience described in this presentation suggests that this is often not the case. There were 15 examples of such pelvic disorders in the absence of concomitant urinary tract disease.

Physicians are becoming increasingly cognizant of the importance of disease of the urinary tract as a cause of disability and of irreversible renal disorders of later life. Infection of these organs has been greatly neglected in the past. It has been stated that chronic pyelonephritis is second only to chronic glomerulonephritis as a cause of serious kidney disease.[4] It is not necessary to emphasize the difference in prognosis and in weapons available for treatment in the two diseases.

It is strongly urged that bacteriological examinations of the urine should be performed more frequently, not only by gynecologists but by all other physicians. Although it is preferable to secure urine specimens by catheter, experience has shown that voided specimens also can be used. Accurate and significant results may be obtained if proper precautions are taken. The patient should void into a sterile, wide-mouthed bottle which is transmitted to the laboratory without delay. Culturing techniques which yield roughly quantitative results must be used. Before instituting further measures, a second urine culture should always be obtained where the first is found to be positive.

More detailed study of the urinary tract should be undertaken in patients whose symptoms and signs indicate the presence of chronic infection or an intra-abdominal disorder not otherwise explained. Individuals in whom there is a definite past history of urinary tract infection, or in whom anatomical abnormalities of the urinary passages are known to be present, also require frequent bacteriological examination of the urine. Persons in whom infections are discovered should be carefully followed for long periods of time after adequate treatment has been completed because recurrence of disease is a frequent event in such cases.

A bacteriological examination of the urine might well be a part of preemployment and insurance examinations and be undertaken on the initial study of individuals participating in group medical care programs. Progress in the prevention of chronic infections of the urinary tract and their serious sequelae will be attained only by repeated and careful study of the urine of large numbers of apparently healthy human beings.

CONCLUSIONS

1. Unsuspected urinary tract infections were discovered in 4.4 per cent of a selected group of relatively healthy young women attending the Out-Patient Clinic of Stanford University Hospital.

2. The cases of five patients with definite infection, including three with chronic active pyelonephritis, are presented in detail and the response to treatment is outlined.

3. The sequelae of infections of the urinary tract are discussed and a plea is made for more frequent and detailed study of the urine by clinicians.

REFERENCES

1. Elliott, W.: Demonstrable genito-urinary disease in presence of normal urinary findings, Minn. Jour. Med., 24: 546 (July), 1941.

2. French, P. K.: Importance of urologic examination in cases of chronic obscure ailments, Urol. & Cutan. Rev., 48:214 (May), 1944.

3. Lintgen, C.: Significance of urinary symptoms in women, Urol. & Cutan. Rev., 46:279 (May), 1942.

4. Longcope, W. T.: Chronic bilateral pyelonephritis. Its origin and association with hypertension. Ann. Int. Med., 11:149 (July), 1937.

5. Marple, C.: Frequency and character of urinary tract infections in an unselected group of women. Ann. Int. Med., 14:2220 (June), 1941.

6. Munger, A. D.: Newer concepts in diagnosis and treatment of urinary tract infections, Jour. Iowa Med. Soc., 32:112 (March), 1942.

7. Weiss, S., and Parker, F., Jr.: Pyelonephritis: Its relation to vascular lesions and to arterial hypertension, Medicine, 18:221 (Sept.), 1939.

Treatment of Urinary Tract Infections

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IN the treatment of urinary tract infections, the urologist, when this is feasible, should assume the management and responsibility for proper care. He is equipped both with experience and facilities to do so. With the advent of the sulfonamides and antibiotics, and their universal use, fundamental facts are lost sight of and unnecessary complications ensue. Enumeration of these facts may seem elementary but their application will save much time and misery for the patient.

ETIOLOGY

These infections are the result of invasion of the urinary tract by organisms causing various inflammatory changes. There are only a few kinds of such organisms, and they are classified as (1) pyogenic (coccus and bacillus), and (2) non-pyogenic or specific (gonococcus and tubercle bacillus). The infection may be a mixed one. This discussion is limited to the pyogenic form. Because of the predilection of each form for different parts of the tract, this differentiation is essential to successful treatment.

DIAGNOSIS

Uncomplicated acute urinary tract infection usually is self-limited and clinically disappears in two to four weeks. Acute appendicitis, cholecystitis, and salpingitis may simulate it, and early establishment of the correct diagnosis then may be life-saving. The subacute and chronic forms are easily diagnosed but the damage may have been done. The focal renal infections, such as infected infarcts, multiple abscess, or carbuncle may go undiagnosed or extend to the perirenal area and require surgical operation for relief. Such infections are usually coccal in origin. Thus, fundamentals are of value. These include taking a careful history, general examination, examination of the genitalia, microscopic examination of the urine for pus and for organisms with or without pus (cocci or bacilli) or pus with tubercle bacilli, examination of the prostate and seminal vesicles, roentgenographic examination of the whole tract including the prostate, and, last but very important, determination of kidney function.

Naturally, these are not done in a patient with pyuria due to a urethral discharge alone, but unless the genitalia are examined before the patient voids, the discharge may not be seen.

In treating patients with acute infection or those with recurrence or chronic infection, this data will prove valuable and its recording will gain the confidence of the patient. The general practitioner can make the examinations but may require assistance in interpretation and advice as to instrumentation.

Collection of Urine: This must be properly done. In the female, the specimen should be taken by catheter after thorough cleansing of the external

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Read before the Section on General Practice at the 76th Annual Session of the California Medical Association in Los Angeles, April 30-May 3, 1947.

genitalia. In the male, a catheter is not necessary when the patient can void, but the genitalia should be thoroughly cleansed. In each case any discharge of pus or blood should be stained and examined microscopically. This alone may lead to the diagnosis. The next step in the male is to have him void in a steady stream and catch some of the urine in two or three glasses, the second of which should be sterile. This is a true bladder specimen and will suffice for cultural and microscopical studies.

Examination of the urine should include a Gram-stain or a simple methylene blue smear. Cocci or bacilli or both may be noted and proper treatment instituted while a report on culture growth is awaited. Tubercle bacilli should be looked for.

It is very important to make blood cultures in cases of acute infection. These are commonly positive but not necessarily ominous. Fortunately, the bacillus is the most common invader as well as the least serious, as the infection then usually involves only the drainage system of the tract, while the coccus is apt to involve the deeper structures of the kidney such as the parenchyma only, and thus its presence may present no signs or symptoms in the urine. Negative findings in the urine in such cases may hinder early diagnosis, so that surgical operation becomes necessary to save life. In a generalized septicemia, both kidneys become involved.

Blood chemical determinations also are advisable at times.

Predisposing factors to infection are mainly stasis and obstruction. These lead to recurrences, chronicity, and more or less damage. Again, the urologist enters with his equipment, to determine whether complications exist, as a successful treatment presupposes their eradication.

At times, infection with obstruction requires immediate instrumentation. This is justified and advisable, provided drainage is also secured. The obstruction can thus be localized and the extent of damage both by infection and back pressure determined.

Intravenous urograms are useful, but are not advisable in the presence of high fever. Too much reliance should not be placed on their interpretation. They are of value mainly to determine the presence or absence of anomalies, hydronephrosis, or obstruction. In the subacute, chronic, and recurring infections, thorough instrumental examination must be made, including relative functional tests and bilateral pyelo-ureterograms.

TREATMENT

Consideration of treatment calls to mind certain fundamental questions: (1) Is the infection acute or chronic or recurrent? (2) Is the invader coccal, bacillary, or specific? (3) Is a complication present (stone, obstruction, or anomaly), or the tract normal? (4) Is it an upper, lower, or combined tract involvement and is it unilateral or bilateral? (5) Is there loss of renal function? These questions the urologist can answer.

Some simple cases of pyuria with only local bladder symptoms respond readily to prostatic massage and urethro-vesical irrigations with or without chemotherapy. Again, in females, simple bladder lavage through a catheter may suffice. Acute and toxic infections demand early treatment for symptomatic relief and the prevention of complications.

Drugs alone seldom cure. They are mainly prophylactive and palliative. Undoubtedly, with our present-day knowledge of their uses and actions, much less urinary tract diseases will develop. However, indiscriminate use of them is to be condemned as the patient may be rendered symptom-free, with the clearing of local infection, although the underlying disease persists and may progress. Only a few medicines are good. To use them empirically is unadvisable. Too often the subsidence of sypmtoms is interpreted as a cure. In many cases, bacteriuria is symptomless but chronic. With a recurrence, the patient may drift or seek drug-store advice, and much early time is lost in making an accurate diagnosis.

Water is still a medicine of choice. The drinking of three to four liters daily is usually advisable. Preliminary studies should have ascertained if this amount is safe.

Diets are difficult to administer as well as to tolerate.

DRUGS

The drugs useful in treatment are acidifiers, sulfonamides, arsenicals, and antibiotic. The dyes probably have some psychic effect. Methylene blue, .065 gm. two to three time daily, does decrease bladder discomfort. Alkalies and bladder sedatives are palliative, as are copious fluids. Mandelic acid is a valuable acidifier; in divided doses (8 to 10 gm. daily), it will cause the pH to reach 5.5 where it may be bacteriostatic. The disadvantages are that the urine must be concentrated, which means a low fluid intake. Furthermore, impaired kidney function contraindicates its use. It may be of value against Gram-negative bacilli or streptococcus fecalis.

Sulfonamides: The results with these are very satisfactory. The author feels they are the drugs of choice if tolerated, and if the patient can be observed. Small doses of 1 to 2 gm. daily, and at times even less, are just as efficacious as around-the-clock medication, and the likelihood of intolerance is less. They can be used where renal function is impaired. With the small amounts advocated, blood level studies are not necessary. As these drugs are eliminated almost entirely by the kidneys, it is not necessary to concentrate the urine, and fluids can be forced. Mild signs of toxic reaction such as headache, dizziness, or weakness, which are common, should not be a reason for discontinuance. Careful clinical observation will usually give sufficient and ample warning. There is one reaction from sulfonamides which is common and often deceptive. This is the persistence of fever or spiking temperatures even with such small amounts as 0.5 gm. a day. When fever is due to the drug, it is out of proportion to clinical findings (such as pain, tenderness, masses)

or urinary findings. If the drug is the cause of fever, stopping it reduces the temperature in 24 to 36 hours.

The author believes sulfathiazole is as good as any of the sulfonamides. It has less tendency to crystal formation in the urine than sulfadiazine, although this tendency in sulfadiazine in 0.5 to 2 gm. doses daily with copious fluids and with sodium bicarbonate, if desirable, does not present too great a complication. If neither sulfathiazole nor sulfadiazine is tolerated, switching to others of the group is indicated, not forgetting sulfanilamide, again in amounts of 0.3 to 1 gm. daily. Pyuria may persist despite the giving of sulfa drugs, however, which may mean that the organisms are resistant or that a secondary infection, possibly one that has been kept in check by the more virulent organism, has arisen. Sulfonamides seem to be most effective against most Gram-negative organisms and some Gram-positive cocci, but are not effective against streptococcus fecalis.

Arsenicals: One overlooked agent is neoarsphenamine. In pyuria caused by cocci, such as staphylococci, or in a bacterial pyuria, it may be specific. Such low-grade pyurias caused by kidney infection usually clear up with three injections of 0.6 gm. given at five-day intervals.

Penicillin is less effective than the sulfa compounds in the usual run of urinary tract infections. Because of its rapid elimination, the body must be kept saturated either by around-the-clock injections or by single large doses. However, for coccal infections, or where the process has involved the kidney parenchyma, as in multiple abscess or carbuncle, or for infections in the perirenal area, penicillin is definitely indicated. Its good effects in some bacillary infections may be due to the atypical sensitivity of the organisms. Where the possibility of a secondary invader exists or an inhibited organism flares up, the good results from penicillin when the sulfa drugs have failed warrant its use either with the sulfonamides or later. Penicillin and a sulfa drug are advisable as a prophylaxis following catheterization or cystoscopy or surgical operation to prevent unfortunate and prolonged sequellae.

Streptomycin is not a cure-all but is often effective where all other drugs fail. However, besides its high cost and the small supply, there are other objections to use of the drug. Its use is inadvisable if kidney function is impaired, as 80 per cent of it is excreted through the kidneys if it is injected perenterally; it reaches a high degree of concentration in the urine in less than eight hours. It is of no value where stasis exists. Organisms killed by it in vitro are not necessarily affected in the body. Tolerance is often built up so that large divided doses must be used at the outset, at least 3 gm. daily. If taken orally, 90 per cent of the drug is not absorbed.

SURGICAL TREATMENT

Treatment by medication is not always successful. Ten to 30 per cent of patients have recurrences, and major surgical operation is necessary in probably about 30 per cent. With stones complicating, fully 50 per cent require nephrectomy. About 25 per cent of patients with simple pyelonephritis have a recurrence of the disease, with the opposite kidney affected in some cases. There is permanent kidney damage, as shown by functional tests, in about 30 per cent of patients who have had simple pyelonephritis.

CONCLUSION

The urogolist should manage the treatment of urinary tract infections. He can make an accurate diagnosis, outline the treatment, medical or surgical, and handle complications.

Complications are factors predisposing to chronicity and recurrences.

The organism causing the infection should be identified. A predilection for different parts of the tract may be demonstrated.

Only a few drugs are of value. The sulfonamides are the drugs of choice. Penicillin and streptomycin are good adjuncts but have limitations.

384 Post Street.

Medical Treatment of Urinary Tract Infection

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INFECTIONS of the urinary tract can be and should be treated by the physician in general practice or by the internist so long as there are no complications. It is only when such complications exist or arise that the cooperation of the urologist must be sought. This communication is to outline some of the principles of medical regimens and their limitations, as regards infections of the bladder, ureters and kidneys, excluding venereal disease and tuberculosis.

Careful diagnosis is the first prerequisite of good treatment. Pyuria in the male can be due to urethritis and prostatitis. Therefore, the patient should void into two containers, the urine of the second voiding being examined microscopically. Pus or bacteria in this specimen usually comes from the bladder, ureters or kidneys. Pyuria in the female in a voided specimen obviously may be due to genital contamination. The urine should be obtained as a "tube specimen" after careful cleansing of the vulva and the urethral meatus, or the patient should be catheterized.

Prior to the advent, about 15 years ago, of effective and specific chemotherapeutic agents, accurate bacteriological diagnosis was not as important as it is today. At present, to treat a patient with pyelonephritis with, say, a sulfonamide without knowing the organism involved is just as poor practice as is treating a patient with pneumonia without seeking the responsible organism. Such practice may deprive the patient of his only chance to have a correct dianosis made and to be given the best known means of treatment. Moreover, many patients have mixed infections, making accurate bacteriological diagnosis more than ever necessary.

A smear of centrifuged fresh urine stained with Gram solution always should be made, and in many cases a culture taken too. In the male a second voiding is adequate for smear, and even for culture provided the head of the penis and prepuce have been previously cleansed, and provided also the container is sterile. In the female a tube specimen may be used for smear, but urine for culture must be obtained by catheterization.

Acute pyelitis and pyelonephritis (the former probably does not exist without the latter) is an acute febrile illness often with considerable toxicity. In treatment the need for adequate fluids is paramount, and where the oral route is not possible because of vomiting, intravenous infusions are important. A word of caution is not out of place here, for one occasionally sees disregard for the speed of injection, and sees saline given to the point of anasarca. Provided two to three hours is taken per litre of fluid, and not more than two litres of fluid contain saline as well as dextrose, even older debilitated individuals can tolerate such treatment without developing heart failure or edema. Rarely is more than four litres per day necessary or wise.

In addition to fluids these patients are in need of rest and warmth. Their kidney pelves and surrounding parenchymae are edematous and inflamed. The possibility of further irritation of these tissues must be considered when nephrotoxic drugs are administered. Merely alkalinization with potassium citrate or sodium bicarbonate may be wiser for the first few days.

When the acute infection is limited to the bladder there is less danger of further tissue irritation by too early administration of chemotherapeutic agents. Fluids are, of course, important here also. Further added comfort can be given the patient by hot Sitz baths, and, in women, by hot vaginal douches. Symptoms of strangury sometimes respond to alkalinization or to hyoscyamus or to belladonna.

In chronic pyelonephritis and in chronic cystitis many of the same therapeutic principles apply. It is important here to realize that the reason for the chronicity is usually a mechanical difficulty. Some of these mechanical factors will be mentioned later. Treatment of them, of course, falls within the realm of the urological specialist.

The possibility of urinary tract tuberculosis always must be kept in mind when the cause is not apparent. Moreover, tuberculosis can co-exist with other bacterial infections. The diagnosis is made by finding the organism in catheterized urine specimens, or better by culture or by guinea pig inoculation. Except for possible palliation with streptomycin, the treatment is surgical.

The rare fungus and protozoan infections are beyond the scope of this presentation.

SULFONAMIDES

Sulfonamide preparations are discussed first, not because they are the drugs of choice, but because they are used so universally and so rashly not only for urinary tract infections but elsewhere, some of the dangers should be re-emphasized. Fatalities from tubular obstruction are well known, but deaths also have occurred from renal damage and anuria even in the absence of crystalline deposits. Bone marrow depression and death after as many as five weeks with as small a dose as 1 gm. a day have been reported. Followers of Arnold Rich worry about generalized blood vessel sensitization. Such speculation merely enhances the need for caution in the use of a valuable therapeutic agent, and makes it necessary to weigh the possible benefits against the in-

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Read before the sections on General Practice, General Medicine and Urology at the 76th Annual Session of the California Medical Association in Los Angeles, April 30-May 3, 1947.

herent dangers. If another drug offers equal therapeutic promise, that drug should be preferred to sulfonamide. Moreover, sulfonamide should not be administered in the presence of an elevated blood urea. It should not be administered unless the patient is warned to report decrease in urinary output. Blood counts (white cell count and hemoglobin are adequate) as well as urine examination must be done twice a week for at least the first two weeks, and once a week for six weeks during treatment with small doses, more often still with large doses.

Of the sulfonamides, sulfadiazine and perhaps sulfacetimide are probably best. More recently a combination of sulfathiazole and sulfadiazine has shown promise. In severe infections 1 gm. every four hours day and night is usually adequate, in the less severe 0.5 to 1 gm. four times daily. Fluid intake to secure 1000 to 1500 cc. output of urine daily is essential. Added sodium bicarbonate sufficient to alkalinize the urine is desirable. Sulfonamides are useful against bacillus coli, aerobacter aerogenes, staphylococcus and streptococcus. They have no effect against streptococcus fecalis, and rarely against bacillus proteus or pyocyaneus.

PENICILLIN

As the majority of urinary tract infections are caused by Gram-negative bacilli, penicillin has a very limited field of usefulness. It is specific for certain strains of streptococcus fecalis. It has some value with occasional proteus infections. Dosage of 40,000 to 200,000 units daily parenterally is usually adequate. Allergic reactions to penicillin are being reported in increasing number.

STREPTOMYCIN

Streptomycin, the youngest of the chemotherapeutic family, has proven effective against over 80 percent of the Gram-negative, and also many of the Gram-positive organisms found in the urinary tract. It is of particular value against proteus vulgaris and aerobacter aerogenes, but it is effective against most bacillus coli, some pyocyaneus, and many staphylococci. In many patients sterilization of the urine takes place, but in others a clinical remission is induced without sterilization of the urine. Especially when obstruction is present is permanent sterilization of the urine rare. Furthermore, temporary benefit has been obtained in some patients with tuberculosis. It must be stated, however, that the very promising results of the in vitro experiments have not always been attained in the human subject.

Unlike penicillin, streptomycin is excreted slowly and 40 to 60 percent appears in the urine in 24 hours, against 60 percent in one hour for penicillin. Streptomycin excretion continues for 48 hours after administration ceases. The dosage must usually be high, 2 to 4 gm. per day, administered intravenously or intramuscularly, at 3 to 6 hour intervals. However, recent work has shown some more sensitive organisms, e.g. certain E. coli, to respond well to 1 gm. per day. In vitro strain sensitivity should be tested if possible. The use of sodium bicarbonate or potassium citrate by mouth in conjunction with streptomycin may increase its effectiveness. The drug does not impair renal function.

The disadvantages of streptomycin are the excessive cost, the necessity for injections, and the unpleasant side reactions such as local irritation at the site of injection, headache, vertigo and deafness, and sensitization, with fever and rash. With 3 gm. a day such reactions have been reported to occur in 46 percent and with 4 gm. per day in 60 percent of patients. With the newer, more purified preparations these figures may have to be revised. Anemia and neutropenia plus purpura have been reported. Finally, many organisms very rapidly build up streptomycin resistance. To obviate this, maximum injections must be given from the start. This whole subject is still in its infancy, and many changes may arise in the present conception of the indications and contraindications for the use of streptomycin.

MANDELIC ACID

Mandelic acid is a drug effective in the treatment of many urinary tract infections. While the results are not as dramatic as with some of the newer agents, it is also less toxic and has been unnecessarily neglected. However, it acts only if the urine has been rendered acid at least to pH 5.5 by the addition of ammonium chloride, usually 5 to 8 gm. a day of the enteric coated tablets. The urinary acidity should be tested repeatedly by nitrazene paper. Calcium, sodium or ammonium mandelate in 10 to 14 gm. doses per day after meals is usually adequate, and with the ammonium salt less added acidification may prove necessary. Mandelic acid acts only through its effect on the urine, so that fluids must be limited to 1000 to 1500 cc. which makes it unwise for a patient with a high fever. It is also contraindicated in the presence of elevated blood urea, and it is not tolerated well by old people. Nausea can often be prevented by administration after meals. It is a bacteriocidal against most Gram-negative organisms such as E. coli, aerobacter aerogenes and against some B. pyocyaneus, although the latter bacillus, being a urea splitter, makes the urine hard to acidify. Mandelic acid is also effective against staphylococci, hemolytic streptococci, nonhemolytic streptococci, and against streptococcus fecalis.

METHANAMINE

Methanamine, the oldest of the antiseptics in common usage, still has a field of usefulness. In dosage of 0.6 gm. 3 to 4 times a day in combination with sodium acid phosphate or preferably with ammonium chloride sufficient to acidify the urine to pH 5.5, it will sterilize many B. coli infections, and it is milder and produces less toxic effects. It lends itself particularly to the treatment of low-grade chronic infections, especially in the aged. However, hematuria must be watched for.

PYRIDIUM

Pyridium, one representative of the azo dye group, is not a potent bacteriocidal agent. It has value in

some chronic low-grade infections, especially where acidification is difficult. It seems effective both in alkaline and acid urines.

ARSPHENAMINE

Arsphenamine has been found effective against certain rare cases of abacterial pyuria where tuberculosis has been excluded.

The medical treatment of urinary tract infections, as herein outlined, can be curative. It is important to remember, however, that infection is often present because of stasis or obstruction. There may be obstruction due to stricture, to prostatic hypertrophy, to cystocele, to tumor, or to calculus as well as to many other factors. Permanent sterilization of the urinary tract is difficult in the face of these obstacles. Of greater importance, the overlooking of the other factor may have serious effects for the patient. Obstruction may lead to chronic hydronephrosis, to renal failure, to hypertension, and to death.

No patient whose urine does not promptly become sterile and remain so for several weeks after therapy should be discharged. Every patient with acute pyelonephritis whose urine does not become sterile within one to two weeks under active treatment should have further investigation, including at least intravenous pyelography. Three to four weeks' treatment of the patient with chronic disease should be similarly considered an adequate test of the effectiveness. Suggestion of obstruction should indicate the assistance of a urologist. During the early stages of acute illness, instrumentation and even pyelography are unwise, but the patient who is not responding to conservative measures must be subjected to further study.

SUMMARY

Treatment of pyelonephritis or cystitis should be by the general practitioner or internist.

Effective therapy requires bacteriological diagnosis by smear or culture.

In treatment of acute infections parenteral fluids are often given too fast and without regard for content of salt.

Antibiotics include streptomycin, penicillin, sulfonamides, mandelic acid, methanamine, pyridium, neoarsphenamine.

Sulfonamides, even in small doses, may produce grave reactions, and patients require constant laboratory and clinical supervision. When equally effective, other agents should be preferred to sulfonamides.

If disease is refractive to treatment, and urine does not become and stay sterile, search for obstruction must be made with the aid of the urologist.

384 Post Street.

Torsion of the Testicle

Lloyd Kindall, M.D., and Thomas T. Nickels, M.D., *Oakland*

CONSIDERABLE interest in torsion of the testicle has been shown in the urological literature in the past three to five years, with many new cases being reported. All authors feel that numerous cases of torsion diagnosed at operation are never reported and that many remain undiagnosed. Early recognition of the condition is extremely important because of the serious sequelae which may ensue within eight to twelve hours.

This entity has been reported at birth, and as late as the 68th year of life, with the vast majority falling in the second decade of life. Incidence is approximately equal on either side.

PREDISPOSING AND EXCITING FACTORS

Most writers agree that torsion does not occur in a normal testis. The occurrence of torsion outside the tunica vaginalis is not accepted by many authorities. In any event torsion which occurs within the tunica vaginalis is predominant.

Many anomalies predisposing to torsion have been enumerated: Hypermobility of the testis, loose connections between testis and epididymus and between the scrotal contents and the tunica vaginalis, abnormal attachments of the cord to the testis, voluminous scrotum, absence or faulty development of the gubernaculum, blood supply entering the upper pole instead of body of the testis, and, of most importance, a voluminous tunica vaginalis with a high insertion on the cord with cremasteric fibers within the tunica. The exciting cause may be a "strain" or sudden effort but the torsion may occur in sleep where the initiating factor most probably is an aberrant contraction of the cremasteric muscle. At present less than half the reported cases are in patients with undescended testes.

PATHOLOGY

The pathological changes are those of varying degrees of avascularity with the end stage being a congestive infarct, finally resulting in necrosis leading to atrophy. Rotation of the torsion usually takes place from without inward, varying from 90 to 360 degrees.

SUBJECTIVE AND OBJECTIVE FINDINGS

Symptomatically there is sudden severe pain in the testis following a "strain" or sudden exertion, with subsequent swelling appearing rapidly. Nausea, vomiting, acceleration of the pulse, and slight elevation of the temperature have been noted. There may be some elevation of the leukocyte count. A history of recurrent pain and swelling of the testicle may be obtained.

Read before the section on Urology at the 76th Annual Session of the California Medical Association in Los Angeles, April 30-May 3, 1947.

Physical examination reveals an enlarged, markedly tender, retracted gonad. Elevation of the affected gonad always aggravates the pain, whereas the pain of acute epididymitis tends to be lessened by elevation. Dillon's sign of early edema and fixation of the scrotal contents to the adjacent coverings may be present. Before scrotal edema has developed the epididymus may be felt in an abnormal relationship to the testis. In advanced stages of the disease the testes are atrophic and asymptomatic.

CASE REPORT

Recently a 17 year old male was admitted to the hospital with a history of being awakened with fairly severe left testicular pain which lasted seven hours. Three weeks prior to entry he had been awakened by sharp pain in the left testicle which subsided in a few minutes. Three days later, while the patient was playing football, the pain recurred but again subsided in a few minutes. Examination revealed a slightly enlarged, non-retracted, tender left testis and epididymus with a normal relationship of the structures. The temperature was 99.6F and the pulse rate 88. Urine and prostatic fluid were normal. The leukocyte count was 13,400 with a slight increase of the polymorphonuclear neutrophiles. The blood sedimentation rate was normal.

The decision for surgical exploration was finally based upon a normal sedimentation time, and an intravaginal torsion was found at operation.

A normal sedimentation rate in the presence of a normal or near normal leukocyte count may be very helpful in the differentiation of early torsion from acute epididymitis. There is early acceleration of the sedimentation time in acute epididymitis, whereas the rate is normal in the early stage of torsion.

DIFFERENTIAL DIAGNOSIS

Acute epididymitis may closely simulate acute torsion, but in the former, findings of infection, urethral discharge, pyuria, prostato-vesiculitis or recent neisserian infection are present. More tenderness of the inguinal cord is present in acute vasitis and funiculitis than is usually found with torsion. Symptomatically an acute strangulated hernia may closely simulate torsion, but gastro-intestinal symptoms in the latter are less severe. Absence of the testis within the scrotum on the affected side should lead to suspecting torsion of an undescended testicle. However, immediate surgical exploration is indicated in either case. Torsion of the vestigial appendages of the testis usually runs a milder course, with differentiation very difficult. Since immediate operation is indicated in any event, differentiation here becomes a matter of academic interest. Acute orchitis of mumps is almost always associated with primary parotitis, with pain usually much milder and the cord not involved. Tumor of the testis is usually a

slow growing asymptomatic testicular enlargement. Genital tract tuberculosis will reveal a thickened and beaded epididymus or vas. With an intra-abdominal testis, lesions caused by acute appendicitis, acute diverticulitis, ureteral calculus or acute seminal vesiculitis must be considered. Here the correct diagnosis will be aided by the history, physical findings, urinary findings and roentgenograms.

DIAGNOSIS

Torsion should be suspected from a history of sudden onset of pain in the testis with findings of an acutely swollen and exquisitely tender retracted gonad. Negative urinary findings and a normal blood sedimentation rate, as well as positive Prehn's and Dillon's signs where present, are helpful.

TREATMENT

The treatment of acute torsion of the spermatic cord is by immediate surgical operation. Attempts at manual detorsion are unsafe and outmoded, as the torsion may not be completely reduced thereby. Following surgical detorsion, fixation of the testicle should be performed to prevent recurrence. Orchidectomy is indicated with the demonstration of a nonviable gonad. Recent investigators have advocated fixation of the opposing testicle as a prophylactic measure. Surgical intervention should usually take place within eight hours for successful detorsion with a subsequent viable gonad.

SUMMARY

1. Torsion of the testicle must be suspected in any acute sudden testicular pain.

2. Immediate surgical intervention with detorsion and fixation must be accomplished early to prevent testicular atrophy and recurrence.

3. In all cases of doubt immediate surgical exploration is indicated to reduce the incidence of nonviable testes as a sequel.

4. Blood sedimentation rate differences are a possible aid in differentiating acute torsion of the testicle from epididymitis.

400 29th Street.

Discussion by CLARK M. JOHNSON, M.D.

Dr. Kindall has very briefly presented the clinical picture of torsion of the testicle. He has stressed the fact that early differential diagnosis is usually difficult and he has mentioned the conditions which must be differentiated. In addition, he has contributed the suggestion that the blood sedimentation rate may be of great value in differentiating early torsion of the spermatic cord from inflammatory lesions. I think that this is an excellent idea because most lesions of the testis and epididymis are inflammatory and, therefore, are of the greatest concern in differential diagnosis. Furthermore, most lesions which may simulate torsion of the testis and are not due to inflammation are lesions requiring surgical operation, or at least are lesions which do not contraindicate operation. Epididymitis in the pre-adolescent youth is more common than we have been led to believe and is not necessarily accompanied by other signs of inflammation of the genito-urinary tract. In these cases particularly, I believe, the sedimentation rate will be extremely valuable in differential diagnosis.

I agree with all that Dr. Kindall has to say about treatment, including the suggestion that it may be wise to fix the opposite testicle as a prophylactic measure. I would like to modify his indications for orchidectomy. I believe that in cases seen too late to offer hope of cure by detorsion surgically the patient should not be operated upon at all. We have no way of telling by palpation or exploration just how much viable tissue may eventually survive, and we know from experience with patients who have suffered gross traumatic lesions to both testes or who have had bilateral orchitis due to mumps, that apparently it takes very little testicular tissue to carry on at least some of the most important functions of the gonad. Orchidectomy should be done only in those cases in which there is obvious gangrene.

CASE REPORTS

◀ Splenectomy in a Case of Disseminated Lupus Erythematosus with Thrombocytopenic Purpura
◀ Valve Deformity During Healing of Subacute Bacterial Endocarditis ◀ Hiatus Hernia: Coincident Hematemesis

Splenectomy in a Case of Disseminated Lupus Erythematosus With Thrombocytopenic Purpura

J. H. Brady, M.D., and
W. S. Neal, M.D., *Visalia*

A REVIEW of the literature on lupus erythematosus, in both its disseminated and chronic discoid forms, reveals an almost complete absence of mention of the associated occurrence of thrombocytopenia. It is, of course, possible that the relationship is not as direct as it seemed clinically in the case to be described. It has been suggested by some authors that cases of this category may well be classified under the newer nomenclature of splenic pancytopenia or splenic neutropenia, but in the case to be described the blood picture did not seem to comport with the usual findings in either of these conditions.

Keil[3] of New York recognized this relationship of thrombocytopenia to lupus erythematosus in 1937, but placed emphasis on the part apparently played by gold compounds in causing the hemorrhagic manifestations and purpura in some cases of lupus erythematosus. Templeton[5] merely presented three cases observed by him in which the patients showed disseminated lupus erythematosus associated with thrombocytopenia.

Since there has been considerable controversy as to terminology and as to the real relationship of these conditions, both conditions found in this clinical study have been included in the title of this discussion.

CASE REPORT

The patient, a 30-year-old white female at the time of examination in January, 1946, had been seen at this clinic several times previously; she had had some moles removed from her face in October, 1941, and a normal delivery of a male infant in June, 1942. She was not seen in this clinic again until the present illness. There had been no previous evidence of lupus erythematosus, although a urinalysis on November 18, 1941, showed 1-plus albumin and a very few red blood cells and pus cells. A Kline test of the blood gave a negative result.

The chief complaint during the present illness was weakness, a generally "run-down" condition, and skin lesions of the face, all of which had been gradually coming on for several months.

Examination revealed the patient to be rather thin, not appearing acutely ill and with no unusual findings except a typical butterfly-shaped lesion of the face with dryness and fine scales. There were also the findings of a severe cystocele, rectocele, and endocervicitis which had followed the birth of her last child in June, 1942.

On February 21, 1946, urinalysis revealed 2-plus albumin, no sugar, specific gravity of 1.012, and a few red blood and pus cells. A Kline test of the blood was negative. Erythrocytes numbered 3,830,000, with hemoglobin 68 per cent, and leukocytes 4,050 with 78 per cent polymorphonuclear, 2 per cent lymphocytes and 1 per cent transitional forms. At this time it was decided definitely that the patient had disseminated lupus erythematosus, including hemorrhagic glomerulonephritis. Treatment was instituted, using large doses of vitamins, iron, liver extract, and finally three doses of gold sodium thiosulphate, intravenously at weekly intervals. No response was observed, and the patient was referred to a dermatologist for further treatment.

Apparently some improvement occurred in the lupus since the patient did not return with similar complaints until September, 1946. She said that in the interim she had had a vaginal repair performed by another physician but had had no treatment for her lupus erythematosus which was again evidenced by the usual facial lesions, and a return of the full-blown nephritis syndrome. The urinalysis revealed 4-plus albumin, no sugar, many granular and cellular casts, 1 or 2 red blood cells and 18 to 20 pus cells per high dry field, and a quantitative albumin of 269 mg. per 100 cc. of urine.

Intravenous pyelograms were made at this time and revealed essentially normally functioning kidneys. At this time there was an acute exacerbation of lupus with fever, chills, rapid loss of 25 pounds of weight, to 121 pounds, and pain in both kidney regions. The blood pressure was 86 mm. systolic and 50 mm. diastolic. Treatment was the same as that previously used, plus Vitamin K. The urine continued to contain 3 to 4 plus albumin, hyaline and granular casts, red blood cells, and a few pus cells during September and October. Late in October an episode of generalized purpura occurred.

On November 1, 1946, the laboratory findings were as follows: Hemoglobin 61 per cent, erythrocytes 3,570,000, leukocytes 5,200, polymorphonuclear cells 68 per cent, lymphocytes 30 per cent, eosinophiles 1 per cent, and transitional forms 1 per cent. Urinalysis showed a trace of albumin and 1 to 2 red blood cells per field. Bleeding time was prolonged to 45 minutes, coagulation time was 6 minutes, and the thrombocyte count 7,140. The purpura continued to become worse and on November 13, 1946, there was a severe exacerbation of symptoms, plus gross hemorrhage from the bowel, as evidenced by black, tarry stools; also vaginal bleeding and severe bleeding from multiple large bullous lesions of the tongue, nasal, and oral mucous membranes. The patient was hospitalized and given a citrated whole blood transfusion on November 16, and another three days later, but her course was steadily downward, so that as a last desperate measure splenectomy was performed November 19 under spinal anesthesia. Continuous transfusion was given during the operation. The spleen was found to be 50 per cent larger than normal. No accessory spleens were seen and subsequent pathological examination of the spleen revealed no significant findings. Gradual improvement followed the operation. An additional transfusion was given November 22. Laboratory findings on November 23, 1946, showed hemoglobin 51 percent, erythrocytes 3,230,000, with nucleated red blood cells present. Urinalysis showed no sugar and no albumin, but 16 to 20 red blood cells and 6 to 10 pus cells per field. On November 30, urinalysis showed 2-plus albumin, and the urine was grossly bloody. Hemoglobin was 35 per cent, and erythrocytes numbered 2,300,000, but the bleeding time was

now 1½ minutes, coagulation time was 4½ minutes, and the platelet count 23,000. Between November 20 and November 30, the patient received 2,000,000 units of penicillin.

The course postoperatively was steadily for the better. The hemorrhagic bullae of the tongue disappeared: the gross bleeding from the nose, mouth, vagina, bowel and bladder stopped completely. The patient was discharged to her home on December 2, and has remained ambulatory since that time.

On January 15, 1947, the hemoglobin was still only 48 per cent and the erythrocyte count 2,650,000, but the platelet count had improved to 30,800, and the urinalysis showed essentially normal findings. A month later, the bleeding time was 1 minute, coagulation time 4 minutes, and the platelet count had climbed to 80,000. The hemoglobin was 81.6 per cent, erythrocyte count was 3,180,000, and the sedimentation rate 12 mm. in one hour. These latter improvements may be ascribed to massive doses of liver extract, iron, supplemental vitamins, etc.

By April 3, the hemoglobin was 95 per cent. The patient's weight had risen from a low of 111 pounds at the time of operation to 137 pounds, and she looked and said she felt perfectly well. The only complaint has been a recurrence of the facial butterfly dermatitis which had been quiescent for about six months. This partially subsided without treatment other than the avoidance of direct sunlight. The patient has been examined at bi-monthly intervals and appears to be recovered from the purpurie episode.

On November 7, the urinalysis showed acid reaction, specific gravity 1.017, 4-plus albumin, no sugar, and a very few erythrocytes and pus cells. The platelet count was 144,000. The patient's weight was 151 pounds and her general appearance excellent.

SUMMARY

The case reported presents one distinct difference from those previously described in the literature; namely, the manifestations of lupus erythematosus in a subacute stage were present prior to the recognition of thrombocytopenia (as manifested by severe purpura and generalized alarming hemorrhages). Moreover, splenectomy, performed as a life-saving measure after more conservative measures had failed, apparently cured not only the thrombocytopenia and hemorrhagic tendencies but actually seemed to improve the original generalized or disseminated lupus manifestations, including a remission in the nephritic and systemic symptoms.

CONCLUSION

This discussion is presented to refute, in part, the generally accepted belief that surgical operation of any kind is completely contraindicated in patients with lupus erythematosus in its disseminated form.

It is hoped that additional cases may be reported by others, in order further to clarify this rather beclouded subject.

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REFERENCES

1. Cluxton, Harley E., Jr., and Krause, Louis, A. M.: Acute lupus erythematosus disseminatus, Annals of Internal Medicine, 19:843 (Dec.), 1943.

2. Denzer, Bernard S., and Blumenthal, Sidney: Acute lupus erythematosus disseminatus, American Journal of Diseases of Children, 53:525 (Feb.), 1937.

3. Keil, Harry: Relation between "systemic" lupus erythematosus and a peculiar form of thrombocytopenic purpura, British J. Dermatol. & Syph., 49:221-27, 1937.

4. Reifenstein, Edward C.: The medical aspects of acute disseminated lupus erythematosus, New York State Journal of Medicine, 42:2227 (Dec. 1), 1942.

5. Templeton, H. J.: Thrombopenia in acute disseminated lupus erythematosus, Arch. Dermat. & Syph., 29:700-702 (May), 1934.

Valve Deformity During Healing of Subacute Bacterial Endocarditis

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LESS than five years has elapsed since subacute bacterial endocarditis was first reported as curable with penicillin therapy.[9] There has been relatively little time, therefore, during which patients might be cured of the infection and subsequently die of cardiac or other complications. Brief reports of several cases in which autopsy was done are included in general reviews of penicillin therapy of this disease.[1,3,4,6,8,11] Most of the patients in these cases died in congestive heart failure.[1,3,6] Three additional detailed reports of cases in which the subacute bacterial endocarditis was healed and autopsy done later have been published. Rosenblatt and Loewe[12] reported two cases. A woman of 33 showed, during treatment with penicillin and heparin, a change in cardiac murmur from a short aortic systolic to both aortic and mitral diastolic and died in failure three months after completion of therapy. A second woman of 29 with mitral and aortic valve disease died in failure five months after clinical cure. Mokotoff and his co-workers[10] reported the case of a 36 year-old male with luetic aortic insufficiency and involvement of both aortic and mitral valves in the bacterial process who died in heart failure over eight months after completion of curative penicillin therapy. Honigman and Karns[7] reported the case of a woman of 30 with combined aortic and mitral valve disease, with murmurs becoming louder during therapy, and who died in congestive failure four months after completion of the treatment.

The following case report further illustrates the hazard of increasing valve deformity and subsequent cardiac failure during and after penicillin therapy of subacute bacterial endocarditis.

A white female former cannery worker, aged 46, was first seen on June 27, 1946, during an attack of paroxysmal auricular tachycardia. Carotid sinus and ocular pressure did not stop the attack, which promptly responded to mecholyl, 10 mg. given subcutaneously. The patient gave no history to suggest previous rheumatic fever or other serious illness. Her tonsils had been removed at age 12 and her appendix and one ovary at age 38. During the past ten months she had persistently run a fever, sometimes as high as 104° F. and accompanied by frequent chills, despite which she had been able to work until three months before being seen. She had lost 38 pounds in weight and much in strength and had a poor appetite. During this time her menstrual periods had been about twice as frequent as usual and more heavy. During the preceding three months there had been several attacks, lasting minutes or hours, of paroxysmal tachycardia. The presenting attack had lasted 36 hours before it was terminated. There had been no other type of cardiac embarrassment. After preliminary examination and short observation the patient was sent to Alameda County Hospital on July 20, 1946.

On examination there, the patient was emaciated and appeared chronically ill. The skin had a cafe-au-lait appearance but showed no petechiae. Conjunctivae and fundi were pale but showed no petechiae. The lungs were clear to auscultation and percussion. The heart was not enlarged and the tones were of normal quality. There was a somewhat harsh systolic murmur of grade 2 intensity at the apex and a separate, higher pitched systolic murmur localized to the aortic area. Blood pressure was 100 mm. systolic, 70 mm. diastolic. The liver edge was palpable at the costal margin,

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but not tender. The spleen was barely palpable. There was no edema.

A catheterized urine specimen showed no albumin, a light trace of sugar and only epithelial cells on microscopic examination. Blood examination revealed a hemoglobin of 8.3 gm. per 100 cc. Erythrocytes numbered 2,500,000 per cu. mm., and leukocytes 7,850 with 62 per cent segmented polymorphonuclear cells, 8 per cent banded forms and 30 per cent lymphocytes. The sedimentation rate was 116 mm. in one hour (Westergren), corrected. A blood culture showed growth of strep. viridans. A Kline test of the blood gave negative results.

On July 24 penicillin was started, 40,000 units every three hours by intermittent intramuscular injection. Ferrous sulfate in dosage of 1.1 gm. per day was started but discontinued in a week because of gastric intolerance. Blood transfusions were given on August 1 and 7 and September 6, the latter being discontinued when half completed because of a severe chill.

On July 25 there was a paroxysm of auricular tachycardia which was terminated after two days, during which 3.1 gm. of quinidine was administered. On July 29 a moderately loud early diastolic murmur of aortic insufficiency was first heard. On August 1 there was an episode of abdominal pain, nausea and diarrhea. Stools were negative for occult blood. On August 5 the aortic diastolic murmur was noted as being louder. The spleen was no longer felt. The blood pressure was 125 mm. systolic, 55 mm. diastolic. There were two more short paroxysms of tachycardia, one controlled by carotid sinus pressure, the other by quinidine. After this the patient was maintained on 0.2 gm. of quinidine, twice a day. On August 19 penicillin dosage was increased to 100,000 units every three hours because of suspected lack of response of the infection as indicated by continued elevation of temperature and sedimentation rate. On August 22 the apical systolic murmur was noted as being increased in intensity. On September 7 urinalysis showed a marked trace of albumin, 40 to 60 leukocytes and 2 to 4 erythrocytes per high power field, and a positive reaction to a test for occult blood. Penicillin was discontinued on September 16, a total of 27,720,000 units having been given. Hemoglobin had fluctuated between the original 8.3 gm. and 10.5 gm. All blood cultures, five in number after penicillin was started, were negative. The patient was dismissed on October 7, 1946.

On October 30 dyspnea, orthopnea and edema were first noted. In addition to the other murmurs, a presystolic rumble of mitral stenosis was heard. Blood pressure was 130 mm. systolic, 60 mm. diastolic. Digitalis and salt restriction temporarily controlled the congestive failure. Because of return of symptoms of congestive failure the patient was re-hospitalized from January 28 to March 25, 1947. During this time, therapy for the congestive failure was unsuccessful and there was an episode of possible pulmonary infarction. Results of urinalysis were normal. Hemoglobin measured 13.8 gm. per 100 cc. of blood, and results of two blood cultures were negative. The patient was released from the hospital. During the next month signs of congestive failure increased and the patient died May 2, 1947.

Only the postmortem findings of the heart and related lesions will be described. The heart weighed 360 gm. (estimated normal, 290 gm.). The color was light brown and there was a normal amount of epicardial fat. The consistency of the muscle was increased, but this was probably due to the arterial embalming. The tricuspid and pulmonary valves

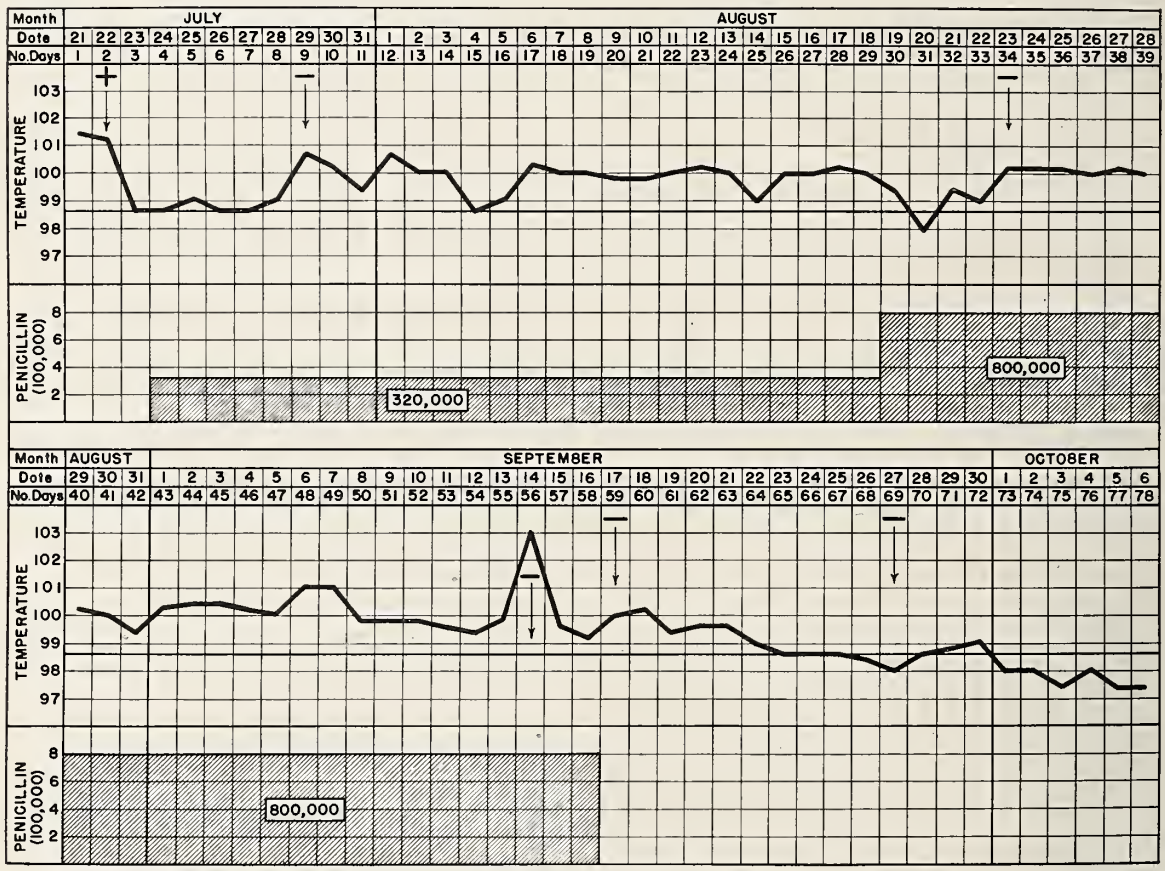


Chart 1.—Temperature chart with penicillin dosage and results of blood cultures.

were normal. The mitral valve leaflets were enormously thickened and formed a slit-like orifice which opened and closed incompletely. (Figure 1) The chordae tendineae were short and thick and the papillary muscles were hypertrophied. In the mid-portion of the opened valve there was a brownish, discolored area. This was thought to be the site of the vegetation. Sections showed blood pigment, but no evidence of an active vegetation. The aortic valve leaflets were thick and cartilaginous, with the edges somewhat rolled, and there were small, irregular nodules attached to the leaflets. (Figure 2) These were areas of lime salt deposit. No vegetation was found. No mural thrombosis was found in the heart.

Infarcts were noted in the lungs, spleen, and right kidney.

It is unfortunate that only one blood culture was taken before penicillin therapy was started in this case. However, the clinical course both before and after treatment was started, and particularly the prolonged fever and evidence of multiple emboli in the systemic circulation, was so typical that the diagnosis of subacute bacterial endocarditis appears to have been adequately proven. It is difficult to determine whether the persistent fever, which did not subside until after penicillin therapy was discontinued, was due to the suspected and later proven infarctions, to dissolution and absorption of the vegetations, or to the therapy itself. Of particular interest was the development of an aortic diastolic murmur within five days and of increased pulse pressure within 12 days of the beginning of therapy. Evidence of congestive failure developed within three months and in nine months the patient died of heart failure which was resistant to treatment. At autopsy there was evidence of marked deformity of both aortic and mitral valves.



Figure 1.—Mitral valve.

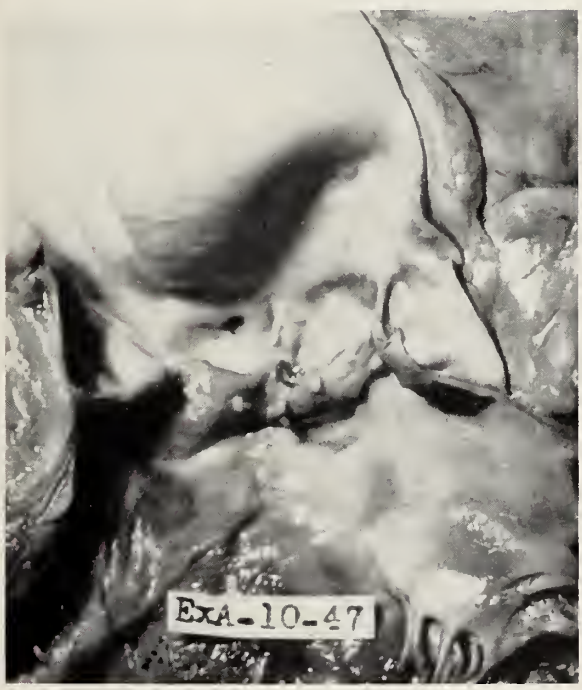


Figure 2.—Aortic valve.

Death from congestive failure shortly after completion of therapy, and particularly when the aortic valve was involved in the bacterial infection, has been reported by several authors.[1,3,5,6,7,10,12] Bloomfield[2] has commented that the development of failure in so short a time in such a high percentage of patients with uncomplicated cardiac lesions, can hardly be ascribed to coincidence. He and others[7,10] have felt that shrinking and deformity which occur during the process of healing and scarring of the infected valve is largely responsible for this untimely failure. The case reported in this presentation provides further evidence in favor of this hypothesis and particularly indicates how soon after beginning therapy this progressive valve deformity may start.

SUMMARY AND CONCLUSIONS

1. A case of healed subacute bacterial endocarditis with marked deformity of aortic and mitral valve and death in congestive failure, is reported.

2. Comment is made on the early clinical evidence and subsequent pathological evidence of progressive valve deformity during the healing of the bacterial process.

REFERENCES

1. Bloomfield, A. L., et al: The treatment of subacute bacterial endocarditis with penicillin, J. Clin. Investigation, 24:251-267 (May), 1945.

2. Bloomfield, A. L., and Halpern, R. M.: The penicillin treatment of subacute bacterial endocarditis, J.A.M.A., 129: 1135-1141 (Dec. 22), 1945.

3. Dawson, M. H., and Hunter, T. H.: The treatment of subacute bacterial endocarditis with penicillin, Ann. Int. Med., 24:170-185 (Feb.), 1946.

4. Favour, C. B., et al: Progress in the treatment of subacute bacterial endocarditis, New England J. Med., 234:71-77 (Jan. 17), 1946.

5. Flippin, H. F., et al: Penicillin in the treatment of subacute bacterial endocarditis, J.A.M.A., 129:841-843 (Nov. 24), 1945.

6. Glaser, R. J., et al: The treatment of bacterial endocarditis with penicillin, J. Lab. and Clin. Med., 31:291-312 (March), 1946.

7. Honigman, A. H., and Karns, J. R.: Healed subacute bacterial endocarditis, report of two cases with death due to congestive heart failure, Ann. Int. Med., 26:704-712 (May), 1947.

8. Levy, Louis, and McKrill, Ned: Results in treatment of subacute bacterial endocarditis, Arch. Int. Med., 77:367-384 (April), 1946.

9. Loewe, Leo, et al: Combined penicillin and heparin therapy of subacute bacterial endocarditis, J.A.M.A., 124: 144-149 (Jan. 15), 1944.

10. Mokotoff, R.: The treatment of bacterail endocarditis with penicillin, results of 17 consecutive unselected cases, Am. J. Med. Sci., 211:395-416 (April), 1946.

11. Priest, W. S., et al: The effect of anticoagulants on the penicillin treatment and pathological lesions of subacute bacterial endocarditis, New England J. Med., 235:699-706 (Nov. 14), 1946.

12. Rosenblatt, P., and Loewe, Leo: Healed subacute bacterial endocarditis, Arch. Int. Med., 76:1-10 (July), 1945.

Hiatus Hernia: Coincident Hematemesis

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HIATUS hernia has been cited as a cause of hematemesis or anemia. The frequency of hiatus hernia and coincident anemia or hemorrhage is sufficiently striking to make this problem one of practical interest. We agree with Shaler and Hampton[5] that unless gastritis or ulceration is present, hiatus hernia per se will not cause bleeding.

It is also true that when a hiatus hernia has been demonstrated to be present, the coincidental presence of other lesions in the gastrointestinal or cardiorespiratory systems must not be overlooked. Ulceration and incarceration of the herniated portion of the stomach may be demonstrated by barium studies. If no ulceration is demonstrated, other sources of the bleeding should be considered. Usually, marked constriction and fixation of the stomach at the hiatus ring is necessary to produce ulceration, and this condition may be demonstrated by roentgenologic methods.

The symptom of hematemesis associated with a hiatus hernia occurred in slightly more than 25 per cent of a group of Harrington's patients. In seven of eight cases in which bleeding occurred there were positive findings, upon operation, of ulceration of the herniated stomach. He states: "Hemorrhage usually is indicative of severe incarceration with fixation of the stomach in the thorax. The bleeding is caused by erosion of the mucous membrane due to the forceful pressure exerted during the attacks of vomiting on the large, distorted, congested and fixed stomach. This erosion may be superficial, or, in cases of long standing, may form a definite ulceration from repeated trauma."

Sahler and Hampton[4] reviewed 221 cases of hiatus hernia, in 32 of which the patients had either moderately marked anemia or a positive history of gastrointestinal-tract bleeding. They conclude: "Bleeding caused by hiatus hernia is probably due to constriction of the hernial ring with resultant gastritis and ulceration of the herniated fundus. *If neither gastritis nor ulceration is present, the lesion will not cause bleeding.*"

The association of anemia and chronic bleeding with a coincident diaphragmatic hernia has been commented upon by others[1,2,4,6,7] and is not unusual. We believe the anemia to have been formerly too often attributed erroneously to the hernia per se. When hematemesis occurs in the presence of hiatus hernia other causes of bleeding from the gastrointestinal tract, which must be considered, include esophageal varices, polyps, other benign and malignant tumors of the stomach with ulceration and peptic ulceration of the stomach or duodenum.

A case report illustrating the necessity for a search for another cause of hematemesis than the hiatus hernia per se, is presented.

The patient was an elderly white female 67 years of age who had an episode of hematemesis in 1942 without preceding symptoms. At that time, the hemoglobin dropped to 6.5 gm., and the erythrocyte count to 2.71 million. A roentgenologic examination revealed a diaphragmatic hernia of the hiatus type. At this time the hematemesis was attributed directly to the hiatus hernia.

The patient was then well until June 26, 1946, when she had a tarry stool associated with nausea and weakness. She felt ill and had periods of faintness until July 2, 1946, when she was admitted to the hospital because she fainted after vomiting dark brown material and some bright red blood.

The past history was not suggestive of peptic ulcer although the patient had occasionally been nauseated and had vomited during the preceding five years. She had been anemic and had "fainting" spells, the exact nature of which was not known. The stool was positive for occult blood on several occasions during the preceding four years. The normal hemoglobin level was well maintained on a convalescent diet including ferrous sulfate and vitamins. The patient had been on a reducing diet containing a moderate amount of raw vegetables for three months prior to the acute hemorrhage.

Physical Examination. Physical examination revealed a moderately obese woman of 67 who was pale and weak from recent loss of blood. The blood pressure on entry was 105 mm. systolic and 70 mm. diastolic, the pulse rate was 94, and the temperature 37.2° C. The heart was not enlarged, there were no murmurs, and the rhythm was regular. The previous day she had visited her doctor, who had found the rhythm was very irregular and suggestive of fibrillation. The abdomen was moderately obese and soft. There were no scars or masses palpable and no tenderness elicited.

Laboratory Data. The erythrocyte count on entry was 1.9 million and the hemoglobin 4.2 gm. (25 per cent). The leukocyte count was 12,000 with 83 per cent polymorphonuclears. The color index was 0.66. The urine was normal and results of Wasserman and Kahn tests were negative. A non-protein nitrogen determination was normal. An electrocardiogram tracing was normal.

Treatment and Course. Six transfusions of whole blood, Rh negative, were given in the next five days. The blood pressure had fallen to 92 mm. systolic, 60 mm. diastolic on July 3, remained in the neighborhood of 100 for several days and rose to 130/82 on July 7. The hemoglobin gradually rose to 10.5 gm. (62.5 per cent) and the erythrocyte count to 3.32 million on July 6. The pulse remained about 90, and the respirations 20. An electrocardiogram on July 2 was reported as showing evidence of myocardial damage of non-specific pattern.

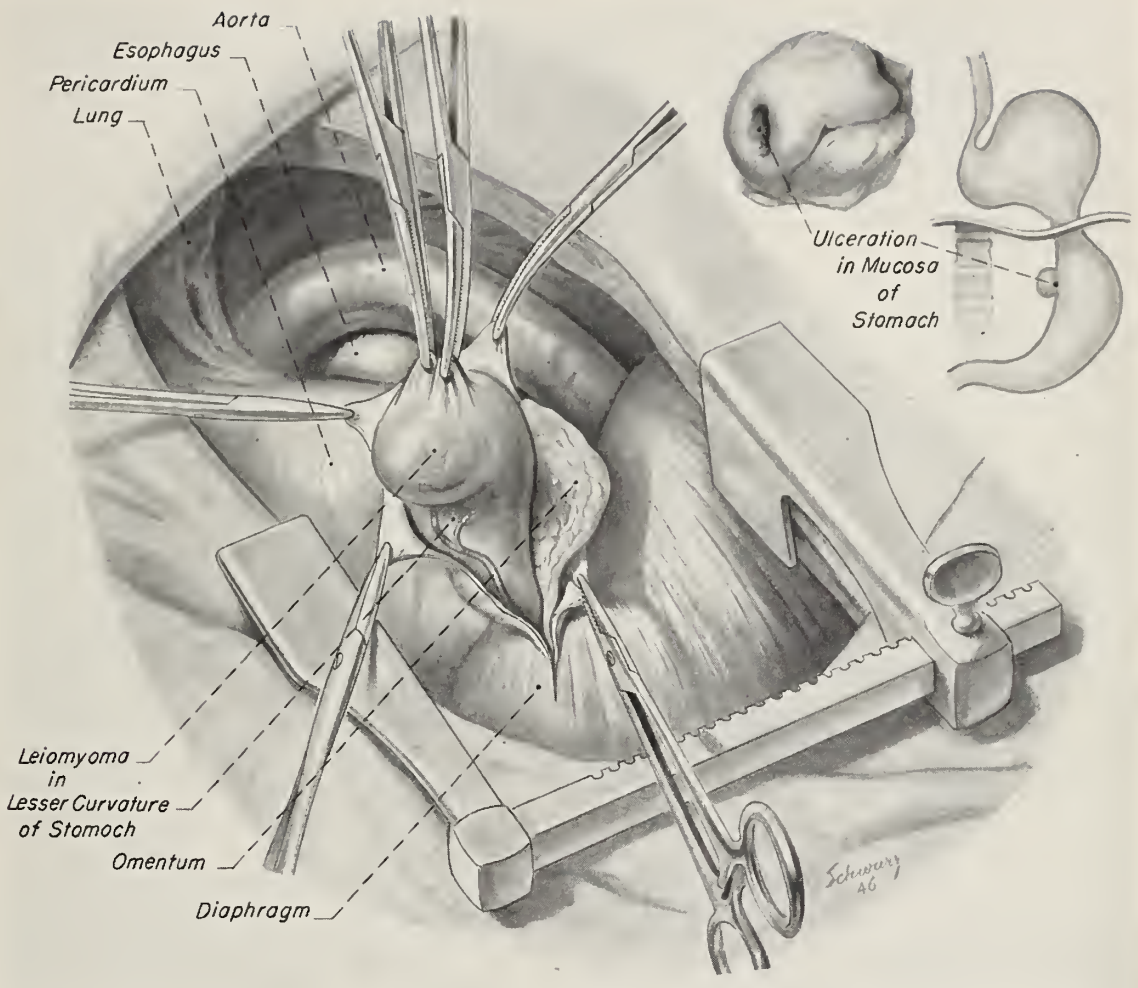
On July 7, the patient was transferred to the hospital for operation. Her general condition was good. The blood pressure was 140 mm. systolic, 80 mm. diastolic, erythrocyte count was 3.5 million with hemoglobin 11 gm. (72 per cent). The total protein was 6.7 gm. per cent with albumin 4.9 gm. per cent and globulin 1.6 gm. per cent. It was considered that the condition of the patient did not warrant repeating the roentgenographic examination of the stomach.

Operation. On July 10, 1946, a transthoracic operation was performed on the left. Posterior to the heart and anterior to the aorta there was a large hernia consisting of the upper portion of the stomach, measuring 10x7 cm. The esophagus extended to within 3 cm. of the hiatus in the diaphragm. The hernia ring was large and did not constrict the stomach. There were no ulcerations, constriction or varices and no cause for the hematemesis was found, so it was decided to explore beneath the diaphragm. There was a true hernia sac over the herniated stomach. This was demonstrated when the diaphragm was opened and the stomach delivered into the chest cavity. On the lesser curvature of the stomach, approximately half way between the cardia and the pylorus, there was an intrinsic tumor mass, 3.5 cm. in diameter. This was round, firm, slightly nodular and freely movable. There was no enlargement of the neighboring lymph nodes and the tumor had the appearance of a benign leiomyoma of the stomach. (See Figure.)

A wedge resection of the stomach was carried out and the stomach closed at right angles to the long axis. The diaphragm was repaired and the hernia sac overlapped to obliterate the space formerly occupied by the hernia. The duration of the operation was two hours and thirty-three minutes.

Postoperative Course. The postoperative course was smooth. The temperature was 37° to 38° C. for eight days, after which the patient was afebrile. Thoracentesis was performed almost daily until July 18, the amount of fluid, thin and pink, obtained varied from 20 to 450 cc. After July 20 no fluid was obtainable. One transfusion was given during the operation,

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Hiatus Hernia incised and incision extended parallel to fibers of diaphragm, showing tumor (leiomyoma) lesser curvature of stomach delivered into chest cavity.

and 1,000 cc. of blood was given after the operation. An additional 500 cc. of blood was given on the 12th postoperative day. The wound healed per primum except for a small portion which contained a hematoma, and this was opened. This portion healed secondarily without difficulty. The patient was discharged from the hospital July 30, 1946, three weeks after operation.

SUMMARY AND CONCLUSIONS

1. Hiatus hernia is not a primary cause of hematemesis but only secondarily causes bleeding when incarceration of the stomach results in (a) gastritis (b) erosion and ulceration of the gastric mucosa (c) congestion and production of local varices. This latter is a possibility which is open to question.

2. Hiatus hernia, uncomplicated, rarely if ever causes hematemesis or anemia.

3. The presence of an hiatus hernia should not lead one astray in making a diagnosis when the presenting symptom is gastrointestinal hemorrhage.

4. If neither the preoperative studies nor the findings at operation reveal the cause of the bleeding, further search above and particularly below the diaphragm is strongly indicated before one could be satisfied that the hiatus hernia per se is the cause of the hematemesis or anemia.

5. A case of gastrointestinal bleeding due to an ulcerated leiomyoma of the stomach in a patient with a coincident hematemesis is reported.

REFERENCES

1. Bock, A. V., Dulin, S. W., and Brooke, P. A.: Diaphragmatic hernia and secondary anemia; ten cases, New England Journal of Medicine, 209:615 (Sept. 28), 1933.

2. Gardner, K. D.: Diaphragmatic hernia associated with secondary anemia, American Journal of Medical Science, 185:561 (April), 1933.

3. Harrington, S. W.: Diaphragmatic hernia associated with traumatic gastric erosion and ulcer, Collected Papers, Mayo Clinic, 21:790, 1929.

4. Moller, Folke: Zwerchfellhernie und Magenkarzinom. Zugleich einige Betrachtungen uber Blutungen und Anamien bei Zwerchfellhernien, Acta Med. Scandinav., 74:421, 1931.

5. Sahler, O. D., and Hampton, A. O.: Bleeding in hiatus hernia, American Journal of Roentgenology, 49:433 (April), 1943.

6. Segal, H. L.: Secondary anemia associated with diaphragmatic hernia, New York State Journal of Medicine, 31:692 (June 1), 1931.

7. Weitzen, Max: Diaphragmatic hernia with severe anemia, American Journal of Roentgenology, 28:808 (Dec.), 1932.

CLINICAL SYMPOSIUM

Prepared under the direction of Edgar Wayburn, M.D., *San Francisco*, and Clarence J. Berne, M.D., *Los Angeles*

Carcinoma of the Thyroid Gland

Clinical Problems:

Dr. Morris Dailey: The clinical problem of carcinoma of the thyroid is, in essence, the differential diagnosis of non-toxic, nodular goiter. Diffuse toxic goiters may be ruled out immediately. They have no relation to malignancy. Likewise, diffuse, non-toxic goiters may rarely be malignant. The overwhelming majority of carcinomas of the thyroid have one or more nodules.

One paradox which demands explanation is the frequency of the disease, relatively, in surgical specimens, and the rarity of it in autopsy material. From Boston we learn that the incidence of carcinoma of the thyroid in postmortem material is five in 19,000; in Los Angeles it is in the neighborhood of one in 1,000 from the Los Angeles County General Hospital; and, in this hospital, somewhere around one in 400. On the other hand, in surgical specimens of non-toxic goiter the incidence varies from 1 to 7 per cent. That is in unselected non-toxic, nodular goiter. Our figure happens to be about 5 per cent. We feel that the evidence from the postmortem table is quite inadequate to establish the frequency of disease. The first reason is that in a charity hospital, which these figures come from, the postmortem material has been diluted to a great degree by such common conditions as cardiovascular disease and traumatic accidents. The second reason is that people with carcinoma of the thyroid do not stay in the hospital—they don't die here, but have their operation and go home, and we may have great difficulty in tracking down any postmortem records of them. Those are two reasons, and the third reason is that I believe we are talking about two different groups of people: On the one hand are those who in life have had nodules that have grown and caused pressure symptoms and hence come to operation; on the other hand are the silent, asymptomatic nodules in the postmortem material.

Sixteen per cent of our patients with carcinoma of the thyroid have been under the age of 20, one-third under the age of 30. It is an entirely different age group from those affected by most types of malignancy. Although involutionary nodules are more common in women than in men, the likelihood of a given nodule in the thyroid being cancer is greater if it is in a man. To put it into figures, the chances of a man's non-toxic, nodular goiter being carcinoma is 1 in 17; in the case of women, 1 in 44.

In general, we want to be suspicious of nodules of recent origin—that is, in the preceding two or three years. Involutionary nodules may grow and extend in size by cystic degeneration, with or without tenderness right over the nodule, but growth occurs more commonly in malignant nodules.

The actual symptoms, no different than those in other types of goiter, are due to local pressure on surrounding structures. In the order of commonness they are: A local feeling of pressure, cough, dysphagia, hoarseness, and frequently having to clear the throat. Many writers on the subject say that hoarseness is exceedingly suspicious of malignancy. We do not believe this. A third of each group has hoarseness, but if we put in a mirror we find it is due to causes other than malignant growth: In malignancy the cord is paralyzed, while the hoarseness in the involutionary group is due simply to pressure and displacement of the larynx. Nearly a third of the patients have no symptoms. The tumor may be so small it doesn't happen to press on any surrounding structure; or it may be that metastatic spread has occurred and the patient has come for other reasons such as pain in the back or legs or protrusion of the eyes.

On examination of the patient, the most important and overwhelming point is the discovery, on palpation of the thyroid gland, that there is a single nodule. I said at the beginning that we won't expect to find malignancy in diffuse goiters, but our records regarding a single nodule in the thyroid gland indicates these expectations: 16 per cent, regardless of any other factor, will actually be malignant; an additional 25 per cent will be benign tumors. We have, right there, a 40 per cent chance of a tumor of the thyroid simply on the basis of the nodule being an isolated one. The actual consistency of the nodule isn't helpful. On the one hand, involutionary nodules may be firm and hard; on the other, carcinomas of the thyroid may feel meaty and relatively spongy or rubbery. Many articles on the subject speak of the stony hardness of the malignant goiter, but that description is inappropriate in our experience.

The actual treatment of this disease can be summarized briefly. The finding of a solitary nodule demands, not that the nodule be resected but that the lobe be removed, including a portion of the isthmus. If there is any suspicion at operation that cervical nodes are involved, radical neck dissection is carried out. In general, postoperative radiation is not used, except for relief of specific symptoms. In the very anaplastic carcinoma, the one almost simulating a sarcoma, which may have grown up in a period of two or three months and throttled the patient from

Taken from the Medical Staff Rounds, University of California Hospital, November 19, 1947.

pressure, the surgical attack is exceedingly difficult and may be simply a matter of putting a tracheotomy tube in place. If respiratory obstruction doesn't occur, the procedure is to remove as much of the gland as possible and then put faith in the effects of radiation.

There is one point in regard to treatment that needs underscoring: Patients with this disease can tolerate remote metastases for a long time. The demonstration of metastases in bone marrow or lungs, for instance, should in no sense be an excuse for not making an attack on the local disease and removing as much of it as possible. The reason for this opinion is that in our 90 cases, ten of the patients have actually had remote metastases—in the lungs and bone, one in the breast—for a period of from three to seventeen years. One man had had a goiter removed when he was about six years of age. He is now a college student and has metastases in the lung from the original tumor. The moral is clear: We shouldn't give up because of remote metastases.

The follow-up of our patients now shows an average survival of 49 months among those with well differentiated malignancies. Of ten patients in the highly anaplastic group, six are dead—this in a follow-up period of only 14 months. Of the total of 90 patients, 21 are dead, 11 of them from respiratory obstruction. Eight of the remainder died from remote metastases, and two of diseases not connected with the carcinoma, although they still harbored carcinoma.

These are the facts, and some of the points to consider when the patient is in front of you are history of growth, nodular consistency, lack of family history of goiter, concurrent symptoms of pressure. On physical examination, the most important point is the finding of a solitary nodule, regardless of anything else.

Pathological Diagnosis:

Dr. Stuart Lindsay: Carcinoma of the thyroid gland is not an uncommon disease. Clinicians are recognizing this process more often than they have in the past, and pathologists with experience are recognizing early malignant thyroid processes which formerly were missed. Like other malignant neoplasms, some carcinomas of the thyroid arise from previously benign tumors. Often the tumor is so extensive by the time it is examined that its site and manner of origin are obscure.

In a recent study of 96 single nodules of the thyroid gland, 38 were involutionary nodules. These nodules are not neoplasms, but are the result of repeated episodes of hyperplasia and involution usually not associated with clinical evidence of toxicity. Thirty-seven of the nodules were neoplasms, and 15 of these were invasive or malignant carcinoma. Eighteen of the 96 nodules were placed in the unclassified group. We were unable to determine whether these nodules were of involutionary origin with proliferative changes or were true neoplasms with some degree of differentiation. The important point to remember is that they are nodules which show evidence of growth and may very well be the precursors of malignant tumors. In a study of 88 multinodular goiters, there were 64 involutionary nodules, 14 adenomas, seven carcinomas and only three unclassified nodules.

In the group of benign neoplasms there are adenomas of four different types. In the less differentiated tumors the cells are arranged in solid sheets. Some show increasing differentiation with formation of acini. As the latter become larger, colloid secretion accumulates in them. The papillary tumors are rather common. We believe that papillary thyroid tumors originate from the thyroid gland and not from aberrant thyroid tissue.

Grossly, the benign neoplasms have a characteristic appearance. They are circumscribed and encapsulated. On section they present a uniform homogeneous appearance and have a pinkish-tan color and a glistening parenchyma with little visible colloid.

In their simplest form, involutionary nodules are composed of very large acini filled with colloid and lined by flattened epithelial cells. Sooner or later there is a secondary proliferation of thyroid tissue, presumably arising by budding from pre-existing acini. Between these large acini, smaller acinar structures grow and may produce a solid growth. Histologically, one cannot distinguish the cells making up this proliferating growth in an involutionary nodule from those of an adenoma or carcinoma. We have suspected for some time that this proliferating tissue in the involutionary nodule might give rise to a malignant tumor, in the same manner that the proliferating tissue of an adenoma may become malignant. In our study of over 100 cases of carcinoma of the thyroid gland there were three cases in which we could be certain from the microscopic appearance that carcinoma had originated in an involutionary nodule. These showed the usual benign proliferation, but in certain areas showed definite histological evidence of malignancy plus invasion into adjacent tissues. In one case distant metastases were present. These findings bring up the question as to whether every involutionary nodule should be removed prophylactically, since this secondary proliferation is so common in involutionary nodules.

In general the malignant tumors present a more variegated appearance, with necrosis and hemorrhage, than do benign tumors. Microscopically a wide variety of patterns is seen in carcinoma of the thyroid gland. One of the more common types is papillary carcinoma. These show gradations from the papillary adenomas to papillary carcinomas of varying degrees of malignancy. In general, the same changes occur in these carcinomas that occur in carcinomas elsewhere in the body. With increasing growth activity, the cells covering the papillary progress become more stratified, pleomorphic, hyperchromatic, until the papillary arrangement of tissue is lost and the pattern becomes largely anaplastic.

Some carcinomas show acinar formation and, at times, the acini closely resemble those of a normal gland. They are lined by uniform cells and may contain abundant colloid. In most carcinomas of the

thyroid gland there is some attempt at differentiation toward thyroid tissue resembling the normal. Other patterns show more solid anaplastic growth. The highly malignant types of thyroid carcinoma may contain multinucleated and spindle cells. They may resemble malignant connective tissue tumors. but sarcomas of the thyroid gland have not been encountered in the University of California Hospital pathology laboratory.

Not all carcinomas of the thyroid are large enough to be felt by the patient or the physician. A young woman presented herself with a row of enlarged lymph nodes in one side of the neck. The nodes were biopsied and found to contain papillary thyroid tissue. Since, in our experience. lateral aberrant thyroid tissue has been metastatic, we felt there must be a primary carcinoma in this thyroid gland, even though no tumor could be palpated. A total thyroidectomy was done. A very small papillary carcinoma with local extension was found.

Clinical Aspects of Treatment with Radioactive Iodine:

Dr. Earl Miller: Radioactive and inert iodine are biologically and chemically identical. The thyroid has a high selective iodine uptake, and administered iodine remains in the gland for a long time. Radioactive iodine emits radiation and it can be followed by following the course of the radiation. Certain diseases are controllable by radiation—for example, carcinoma and Graves' Disease—thus making the clinical use reasonable. Penetrating radiation acts by ionization. Whatever the source of the radiation. ionization is produced and tissue destroyed by it.

The distribution of the iodine in the thyroid can be shown by the distribution of the radiation from the iodine. This radiation can destroy the cells that have taken up the iodine.

Radioactive iodine can be made either in the cyclotron or in the pile. We get ours from the pile at Oak Ridge. Tellurium, an element of atomic weight 130 (52 protons plus 78 neutrons) is put in the pile and irradiated by neutrons. A neutron is captured by the nucleus which increases its weight to 131. The nucleus now has 52 protons and 79 neutrons. The fact that it has 52 protons makes us call it tellurium. This tellerium 131, because it is radioactive, give off a beta particle (a negatively charged electron). When it does that, one of the neutrons in the nucleus becomes a proton. This gives a total of 53 protons and 78 neutrons, which makes it the element iodine.

The material comes as a water-clear, tasteless solution. We predetermine the amount we want to give the patient. This amount then is measured out, diluted with water, and the patient drinks it. Several mouthfuls of ordinary water is drunk following this, in order to wash out the glass and the patient's mouth.

The half-life of the material must be taken into account. Suppose today we receive a bottle which contains a thousand millicuries. Eight days later, there will be 50 per cent, or 500 millicuries, left. By making such a plot of decay, one can tell at any time the concentration of the iodine in millicuries per cc. This is important because this material actually decays at a fairly rapid rate.

Both beta particles and gamma rays are given off. The beta particles are the ones most important in the treatment, but very conveniently this gamma ray is present. It is a very penetrating radiation and allows us to measure the radiations from (and therefore the amount of) iodine 131 at a distance from the patient. It is also fortunate, that the relationship of the number of beta to gamma rays is of the order of 100 to 1, so that every time one gamma ray proton is measured we know that there have already been a hundred beta particles acting on the patient.

The amount of iodine available to the patient is the administered dose minus that lost by decay and excretion. In many of our curves, the uptake and the amount lost to the patient add up to the total amount administered. Note the fact that the thyroid takes up a great deal of the administered iodine, and therefore the radiation is fairly well limited to the thyroid. The various uptake curves can be used diagnostically. In the case of very marked hypothyroidism or thyroiditis the uptake will be low, if the thyroid is normal the uptake will be higher, and in hyperthyroidism still higher.

California Cancer Commission Studies*

Chapter XII

Cancer of the Oral Cavity

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ORAL cancer occurs in a wide variety of forms, and in differing degrees of malignancy. A flexible treatment program is therefore required, adaptable to each individual case. In some instances, cancer is best treated by operative methods, while in others it responds best to radium and roentgen therapy alone, and in still others both surgery and radiation are required.

Cancers in the different parts of the oral cavity are similar, one to another, in several respects. For this reason it seemed advisable to combine the discussion of etiology, precancerous lesions, and differential diagnosis for all forms of oral cancer. Clinical appearance, histopathology, treatment and prognosis, however, differ so widely that they are dealt with separately for (a) tongue, (b) floor of the mouth, (c) mucosa of the cheeks, (d) gums, (e) hard and soft palate.

Early recognition of cancer determines in a high percentage of cases whether therapy will be successful and the patient will survive. For this reason, it is necessary to investigate closely whenever a patient complains of a "vague feeling of something" in his mouth. Benign tumors, though they may seem ever so insignificant, are abnormal, and may be in the process of changing toward malignancy under the influence of irritation. (Figures 1 and 2.)

The possible presence of cancer should be suspected in all such instances, and a tissue specimen should immediately be removed for microscopic examination. The excision of a sample of the growth for biopsy neither contributes to the surface spread of oral cancer nor increases the incidence of metastases. The cost of the pathologic examination should never prove a deterrent: In case of needy patients, most pathologists, upon request of the physician, perform it without charge.

ETIOLOGY

Among the factors responsible for oral cancer, the most frequent are chronic irritation, and inflammation. They may be brought on through oral sepsis, various dental factors, and excessive use of tobacco. The dental factors include periodontal disease, advanced dental caries, injury due to jagged, broken, worn, or rough teeth, and ill-fitting dentures. Oral cancer seems, furthermore, to be related to a group of constitutional diseases, as for instance avitaminosis (especially vitamin B deficiency), hypochromic anemia, and syphilis. A positive reaction to a Wassermann test does not mean that cancer is not present. It may well be that oral cancer never de-



Figure 1.—*Chronic Non-Specific Ulcer.* A granular ulceration, 1.5 cm. in diameter, is seen on the right border of the tongue, midway between tip and lingual tonsil. It has a greyish tinge and is firm, but not indurated. The treatment of choice for all non-specific chronic ulcers is simple excision of the lesion for the purpose of biopsy as well as therapy.



Figure 2.—*Tuberculosis.* A superficial, granular and sloughing ulceration, 1.5 cm. in diameter, is seen on the right side of the floor of the mouth. The lesion is of soft consistency; the margin is fairly well defined, but not rolled. The patient has active pulmonary tuberculosis.

*Organized by the Editorial Committee of the California Cancer Commission.

velops from any single one of these factors, but rather from an interplay of a number of conditions, or from a specific constitutional susceptibility.

PRECANCEROUS LESIONS

The term "precancerous" implies only the possibility, not the inevitability, of malignant degeneration. In certain abnormal states, the oral mucosa is more likely to undergo cancerous change. It has to be assumed that mucous membrane which upon extraneous stimulation produces leukoplakia, keratosis, or immediately cancer, may be inherently abnormal in its tissue reactions. Therefore, the designation "precancerous" should rather be applied to such an abnormal type of mucous membrane, than to the states resulting from anomalous tissue reaction, of which leukoplakia is the most frequent. Inflammations or leukoplakia, singly or combined, were encountered in the mucous membranes of about 50 per cent of all patients with oral cancer. Leukoplakia is most commonly encountered on tongue (Figure 3) and gums, and in later stages usually becomes more diffuse, to cover the hard and soft palate. The factors responsible for leukoplakia are identical with those of cancer itself, enumerated previously.

Clinically, leukoplakia appears in the early stages as a non-palpable, faintly translucent white discoloration. Later on, localized or diffuse papillary plaques of irregular outline develop, opaque white in color, and of fine granular texture. In the late stage, which occurs only in certain cases, the epithelium piles up, forming a more or less circumscribed, thick, white covering of the organ involved. In this phase, characterized by induration, the mucous membrane becomes thick and stiff, and fissures, papillomas (Figure 4) and ulcers are encountered, which must be considered malignant until proven otherwise by biopsy. Furthermore, papillomas, fibromas, lipomas, and even small mucous cysts may become covered by leukoplakia.

DIFFERENTIAL DIAGNOSIS

Definite distinction between cancer and benign lesions is possible only on the basis of microscopic examination. A specimen, several millimeters in diameter, should immediately be removed from the edge of the growth by means of a scalpel, biting forceps, or curved specimen forceps, in such a manner that the tissue will not be crushed.

While there are certain characteristics which may tend to distinguish between benign and early malignant lesions they are so common to both that they cannot be depended upon.

Every thickening on a broad base, all small ulcers, and even a loose tooth which cannot be traced to periodontal disease, must be regarded as an indication of cancer, until proven otherwise *through biopsy.*

CANCER OF THE TONGUE

Eighty per cent of cases of cancer of the tongue occur in the male. It is more frequent along the lateral borders (50 per cent), and on the dorsum (30 per cent), than at the tip (10 per cent), or base (10 per cent) of the tongue.

Lingual carcinoma usually starts as a minute area of overgrowth, noticeable upon digital palpation. As a rule, invasion of the submucosa and the muscularis takes place early, and produces an indurated nodule



Figure 3.—*Benign Papilloma with Superimposed Leukoplakia, Precancerous.* A benign papilloma, 1.5 cm. in diameter, and growing from a narrow base, is seen on the undersurface of the right border of the tongue. Due to irritation by the teeth, leukoplakia has developed on the surface of the papillomatous growth.



Figure 4.—*Extensive Leukoplakia with Secondary Papillomatous Growth.* The entire dorsum of the tongue is covered by leukoplakia which has caused deep, firm ridges. On the left side, a papillomatous growth has developed, which is slightly elevated, irregular, and firm, but not indurated. Repeated biopsies failed to show evidence of cancer.



Figure 5.—*Papillary Type of Cancer, Grade I.* On the left side of the tip of the tongue, a papillary, villus-like tumor, 1.0 cm. in diameter, can be seen. The contour of the tongue has not been changed. The growth is of firm consistency, but not indurated. Apparently it has remained superficial, and no appreciable invasion of the muscularis has taken place.

on and just beneath the surface. Routine examination of the oral cavity should always include digital palpation. Any thickening, plaque, or ulcer, be it ever so small, should be considered as potentially cancerous, and immediately removed for diagnosis.

The superficial overgrowth characteristic of epidermoid carcinoma appears in one of three different forms: Papillary, nodular, or ulcerous.

A *papillary* growth suggests an early stage of the lesion. The tumor is villus-like, or ulcerated. The lesion may persist in the papillary form for months, and only moderate infiltration take place.

Nodular tumors (Figure 5), suggesting an early stage, are common on surfaces least subjected to irritation. Nodular lesions are elevated, sometimes even dome-shaped. The mucosa is smooth and has a pearly appearance. Invasion of submucosa and muscularis occurs early.

Superficial ulcers (Figures 6 and 7), either of primary origin or secondary to papillary or nodular growth appear in 80 per cent of all instances and are highly aggressive. Primary ulcers start as a small "sore spot," producing only a faint sensation of pain. Induration has to be considered as pathognomonic of cancer.

Ulcerous growths in their later stages present the appearance of a crater with indurated and rolled edges, characteristic of actively invading neoplastic tissue. (Figures 8 and 9.) Regional tenderness is invariably encountered. In far advanced cases, the sensation of pain is referred to the ear and temporal regions. Carcinomatous ulcers may at any time become secondarily infected, leading to infiltration, excavation, and metastases.



Figure 6.—*Nodular Cancer.* On the posterior third of the left border of the tongue, a triangular shaped, slightly elevated, non-ulcerated, but indurated growth, measuring 7.0 mm. in diameter, is seen. Its surface is smooth, but glistening, and there appears evidence of early invasion. This cancerous growth is due to primary injury from a sharp, jagged first molar tooth, and there is no evidence of a precancerous stage of this lesion.



Figure 7.—*Nodular Cancer.* On the left border of the tongue, just anterior to a normal lingual tonsil, there appears a nodular, superficially ulcerated growth. The slightly dome-shaped tumor measures 1.5x1.5 cm. in diameter, while invasion in depth amounts to almost 1.0 cm.

Induration of cervical lymph nodes is always due to the presence of cancerous tissue, and indicates the existence of a primary malignant growth, almost invariably within the oral mucosa. The primary lesion is often overlooked, as it may appear as a minute, harmless-looking ulceration near the frenum, along the undersurface of the borders, or at the base of the tongue.

Histopathology: Epidermoid (squamous cell type) carcinoma is most frequently encountered (95 per cent). Other malignant lingual lesions include adenocarcinomas, and various kinds of sarcomas.

Treatment: The chances of recovery are directly related to the duration of symptoms. Treatment of primary as well as secondary lesions should therefore be started immediately.

Prophylactic oral hygiene is necessary, to check the septic condition of the mouth. While waiting for



Figure 8.—*Superficial Cancer Arising on the Basis of Leukoplakia.* Along the right border of the tongue, an ulceration, 2.5x1.5 cm. in diameter is encountered. The ulcer is indurated and of irregular shape. The margin is rough and completely surrounded by moderately advanced leukoplakia. The cervical lymph nodes are not palpable, and no metastatic involvement has subsequently developed.

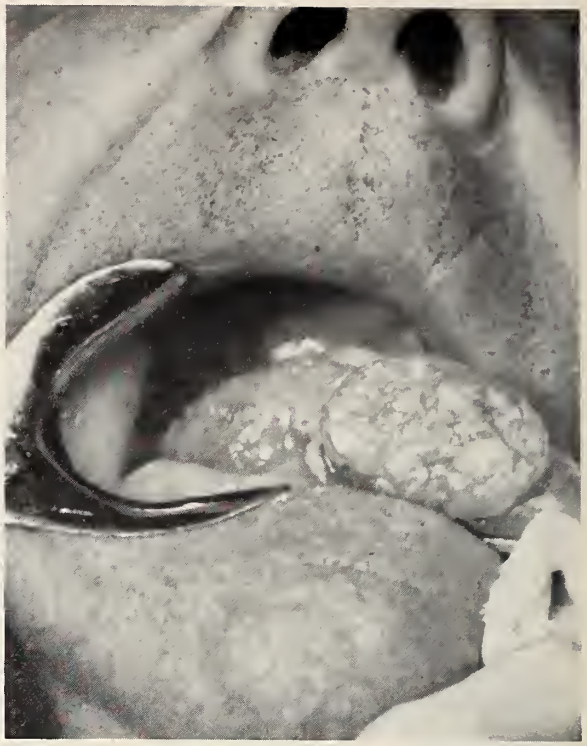


Figure 9.—*Fungating Cancer Arising on the Basis of Leukoplakia.* Along the right border of the tongue, an appears on the right border of the tongue. It is indurated, and bleeds upon slight palpation. The tumor measures 3.0x2.0 cm. in diameter, elevation above the surface of the tongue amounts to almost 1 cm., while the tongue has been infiltrated to a depth of about 1 cm. The entire lingual mucosa is covered by leukoplakia, many of the plaques are in the advanced stage, and cancer originated undoubtedly in one of these patches.

the pathologic report, treatment of the gross infection should be initiated.

Dental prophylaxis includes cleaning of the teeth, filing sharp and jagged teeth, cauterization of areas of periodontal disease, and removal of badly infected teeth. Vitamin therapy, using large doses of vitamin B complex and vitamin C, will freshen the lingual mucosa and aid the healing process.

Selection of the method for treatment of cancer of the tongue is governed by the degree of malignancy, the location and the local extent of the growth and by the presence or absence of metastases.

Treatment of the primary growth consists mainly of x-ray and radium therapy. Lesions of the tip or anterior one-third of the lateral border may be treated by wide surgical excision. Lesions at the base of the tongue are always treated with radiation. Whenever possible a peroral cone is used. It may also be necessary to supplement the x-ray therapy with either interstitial radium or radium needles. The total dosage must be calculated to destroy the cancer, yet not to inflict permanent damage to the surrounding normal cells. In 50 per cent of the cases, the primary lesion will be permanently controlled by the radiation.

In the *treatment of metastatic cervical lymph nodes*, surgical operation is the procedure of choice. Operation is feasible only under certain conditions: *The primary growth must have been unilateral, and must have been completely controlled.* The involved cervical nodes must be unilateral, and on the same side as the primary growth; they must neither be fixed, nor present evidence of spread of the malignant invasion beyond the capsule. The patient's general condition must justify the risk connected with a major surgical procedure. However, cervical lymph nodes with metastatic involvement from a primary growth at the base of the tongue are always inoperable.

A radical neck dissection consists of removal of all tissues between the platysma and the deep cervical muscles, from the ramus of the mandible to clavicle and from the border of the trapezius to the midline. The sternocleidomastoid muscle and internal jugular vein must be removed.

Whenever metastatic cervical nodes prove inoperable, roentgen therapy is supplemented by implantation of interstitial radium needles or radon seeds, into the affected lymph nodes. In very advanced cases it is ill advised to employ either surgical or radium therapy, and purely palliative x-ray treatment is indicated.

Prognosis: In an unselected series of cases, the number of five-year cures amounts to 30 per cent.



Figure 10.—*Advanced Papillary Cancer.* A papillomatous lesion, which had originated on or near the frenum, is seen on the anterior floor of the mouth. The growth has a diameter of 3.0 cm., and has completely destroyed the frenum. On both sides of the floor of the mouth, invasion has occurred; its depth, as judged by the degree of induration present amounts to 5 or 6 mm. The tongue is not infiltrated, and is still freely movable. No involvement of the cervical lymph nodes.



Figure 11. — *Papillary Cancer with Bulky Polypoid Overgrowth.* An oval, ulcerated growth, measuring 4.0x2.0x 1.0 cm., is seen on the anterior floor of the mouth. It originated on or near the frenum, which has been destroyed in the process. The floor of the mouth has been invaded, and the growth is fixed to the mandible. The tongue has not been infiltrated. No involvement of the cervical lymph nodes.

The chances of recovery are higher when treatment is started within two months after the appearance of symptoms. The percentage of five-year "cures" is directly related to the size of the primary growth and to its location, decreasing progressively from the tip to the base of the tongue. In the presence of metastatic involvement of the cervical lymph nodes, the prognosis is much less favorable.

CANCER OF THE FLOOR OF THE MOUTH

In no other part of the oral cavity is cancer more frequently overlooked than in the floor of the mouth. Malignant tumors in this region are usually highly aggressive, and a lump in the neck often is the first symptom. When the origin of cervical metastases proves perplexing, the involvement can frequently be traced to a minute growth in the floor of the mouth.

Clinical Characteristics: Malignant lesions in the floor of the mouth often seem highly insignificant, and resemble benign ulcers which are not uncommon in this region.

Cancer assumes one of three characteristic shapes: Ulcerous, papillary, or a bulky overgrowth. Of these, the *superficial ulcer* with rolled and indurated edges is most common. Yet, in the floor of the mouth, ulcerated tumors are less aggressive than in other parts of the oral cavity, and early invasion takes place only in the presence of constant irritation.

Papillary growths (Figure 10) are most frequently encountered at the frenum linguae, and as a rule present only slight ulceration and induration. Lesions of this type can generally be traced to malignant degeneration of benign papillomata of long standing.

Bulky growths (Figure 11) may progress to such dimensions as to displace the tongue. Such tumors are more frequent on the undersurface of the tongue than on the floor of the mouth proper.

As a rule, metastatic involvement of cervical lymph nodes occurs early: observation of the secondary growth may lead to discovery of the primary lesion. Definite diagnosis of the character of the growth, however, is possible only after microscopic examination of a tissue specimen, removed from the margin of the primary lesion.

Histopathology: Microscopically, malignant lesions in the floor of the mouth are almost always squamous cell (epidermoid) carcinoma Grade II. However, Grades III and IV are also encountered.

Treatment: The *primary growth* is preferably treated with radiation, as the mucous membrane of

the floor of the mouth responds well to this type of therapy. In the presence of only slight invasion, superficial application of radium is indicated in selected cases, using a bulky dental radium mold. Whenever the lesion is accessible, peroral roentgen therapy is indicated. If, however, tongue and anterior tonsillar pillar are also involved, this treatment has to be supplemented by interstitial radiation. In some cases surgical excision of the floor of the mouth and adjacent involved structures may be indicated.

Invasion of adjoining bone calls for surgical intervention. The operation has to include hemiglossectomy, removal of the involved parts of the floor of the mouth of the mandible, and excision of the cervical lymph nodes on the affected side.

Treatment of metastatic cervical lymph nodes proceeds generally as in the case of cancer of the tongue.

Prognosis: In an unselected series of patients with cancer of the floor of the mouth, the number of five-year "cures" amounts to about 35 per cent.

CANCER OF MUCOUS MEMBRANE OF THE CHEEKS

Cancer of the mucous membrane of the cheeks resembles more closely malignant lesions of the lips than cancer in other parts of the oral cavity. Males are about ten times as often affected as females, and the average age of patients is 62 to 65 years. Malignant lesions are most frequent in the anterior and inferior portion of the buccal mucosa.

Clinical Characteristics: Cancer of the mucous membrane of the cheeks usually assumes one of three characteristic shapes: Ulcerous, papillary, or a bulky, cauliflower-like overgrowth. *Ulcerous growths* present rolled edges and an indurated base; even in lesions which appear to be shallow, invasion has frequently extended into the muscularis.

Papillary growths are as a rule only partly ulcerated, and show little invasion in proportion to the surface area involved. The degree of malignancy is usually limited.

Bulky, cauliflower-like growths (Figure 12) are relatively rare. Outgrowth and invasion are usually of corresponding extent.

Histopathology: Malignant lesions in the buccal mucosa are almost always of the squamous cell (epidermoid) type, with differentiated cells, and formation of pearls. Malignancy of Grade II predominates.

Treatment: In lesions with a diameter of 1.0 cm. or less, surgical excision may be indicated. Growths of a larger diameter are treated with peroral roentgen ray therapy, followed by implantation of radium needles, or radon seeds.

Metastatic cervical lymph nodes are treated whenever the conditions enumerated in the section on cancer of the tongue have been fulfilled. In all other instances, only radiation is employed, combining roentgen ray therapy with implantation of radium needles, or radon seeds.

Prognosis: The incidence of serious complications from carcinoma of the buccal mucosa is not as high as in cancer elsewhere in the oral cavity. The prognosis, however, is less favorable than in cancer of the lip, and in an unselected series of cases the number of five-year "cures" amounts to about 35 per cent. When cancer is recognized early and treatment is started without delay, the result is more favorable than in any other part of the oral cavity.

CANCER OF THE GUM

All granulations, ulcerations, and elevations on the alveolar ridges must be considered cancerous until benignity is demonstrated through microscopic examination of a tissue specimen removed from the margin of the lesion. Even in the case of alveolar giant cell tumors, treatment should never be instituted without a complete microscopic study. Invasion of tooth sockets and underlying bone, as well as infection of the primary growth, occurs early in carcinoma of the gingiva.

Clinical Characteristics: Cancer of the gum is observed in two different forms: Papillary and ulcerous. In both types, the gross appearance allows an approximate estimate of the degree of malignancy. Papillary lesions are elevated and fungating (Figure 13), but extensive surface spread is combined with little invasion. Such growths do not produce pain, but their bulk and the accompanying hemorrhage will generally cause the patient to seek relief before invasion of bone has occurred. In the early stages, the tumor forms a solid, smooth, not ulcerated mass (Figure 14), or it may be of papillary appearance, and show a certain degree of ulceration. Dentures will cause rapid spread of the primary growth, as well as early metastatic involvement.

Ulcerous lesions frequently appear as simple, mucosal ulcers. Palpation, however, will demonstrate an indurated border, which has to be considered as pathognomonic. Patients usually complain about pain and soreness interfering with mastication. Invasion is invariably extensive. On the basis of roentgenographic evidence it will be found that bone involvement in early stages is confined to the alveolar ridge, while in fully developed lesions invasion of the body of maxilla or mandible has taken place.

Histopathology: Microscopically, cancer of the gum is almost uniformly of the squamous cell (epidermoid) type. However, the two clinical forms of cancer of the gum differ also in their microscopic appearance: In the papillary type, the keratotic process may progress so far as to produce leukoplakic overgrowths, with no other evidence of malignancy than the presence of well-differentiated pearls; the invasive, ulcerous type, on the other hand, produces little keratiniaztion or formation of pearls, but is characterized by less differentiated cellular elements.

Treatment: The *primary growth* is treated by surgical excision. The plan of therapy, especially the extent of the operative procedure, depends on the degree to which the bony structures have become involved. If little or no invasion has occurred, treatment consists of excision of the cancerous growth



Figure 12.—*Advanced Ulcerous Cancer.* A bulky, ulcerous tumor, measuring 3.5x3.0x2.0 cm. is seen on the anterior half of the mucosa of the right cheek. The growth has infiltrated throughout the full thickness of the cheek. Recent spread to the upper and lower lip is observed. No involvement of the cervical lymph nodes.

and of the underlying bone, combined with cauterization of a wide area. If the malignant process is no longer limited to the alveolar bone, resection of the body of the mandible, or of the maxilla, is usually required. Normal function can be adequately restored through subsequent bone graft. In the case of the mandible, it is desirable to preserve the ascending ramus, and the cosmetic result will be excellent if it is possible to re-insert the digastric muscle.

The treatment of involved cervical lymph nodes consists preferably of radical neck dissection. The indications are the same as in the case of cancer of the tongue.

Prognosis: Cancer of the gum is frequently recognized by the dentist, and the number of five-year "cures," including even cases with bone involvement, amounts to approximately 35 per cent.

CANCER OF THE HARD AND SOFT PALATE

Cancer of the palate is similar to malignant involvement of other portions of the oral mucosa. Frequently it constitutes a secondary invasion from a primary growth of the gum, the tonsil, the tongue, or within a paranasal sinus. In advanced cases, however, it may be impossible to determine at which site the malignant process started.

Clinical Characteristics: Cancerous lesions of the *hard palate* have the characteristic appearance of



Figure 13.—*Early Cancer.* A dome-shaped, partly ulcerated growth, measuring 2.5x1.0 cm., is seen on the right lower gum. The surface is slightly nodular, and leukoplakia covers that part of the tumor which is not ulcerated. The base of the growth is surrounded by a typical rolled edge, which is indurated. The lesion is fixed to the periosteum.



Figure 14.—*Leukoplakia with Early Cancerous Change.* The entire left lower gum is covered by advanced leukoplakia. The keratotic process is more active along the external margin, where a plaque, 1.0 cm. in diameter has developed. This plaque is abnormally firm, and a slight rolled margin appears along its posterior border. Biopsy of a specimen from this area demonstrated early squamous cell epidermoid carcinoma, Grade I. No evidence of bone invasion appeared in roentgenograms, or during operation.

superficial ulcers with indurated, rolled edges, and are commonly of a diameter of 1.0 to 2.0 cm. (Figure 15). Invasion occurs late, due to the compactness of the underlying palatine bone.

On the *soft palate*, cancerous growths appear generally as bulky tumors. Papillary lesions are, however, occasionally encountered, and combine wide surface involvement with little or no invasion in depth. In more advanced stages, the disease process spreads from the soft palate to the anterior pillars of the fauces, and from there to the tonsillar fossa, the floor of the mouth, or the base of the tongue. Not uncommonly a rounded, non-ulcerative lesion is seen, due to a tumor of a minor salivary gland.

Metastatic involvement of the cervical lymph nodes occurs late, and less frequently than after primary malignant lesions in other parts of the oral cavity.

Histopathology: Microscopically, cancer of the palate appears as squamous cell (epidermoid) carcinoma, with well-differentiated cellular elements. Malignancy of Grade II is most frequently encountered.

Treatment: The plan of treatment differs in accordance with the extent of involvement, and also with the likelihood of spread of the disease process. On the *hard palate*, early growths are destroyed through cauterization. This method is not indicated in cases with invasion in depth, as a foramen into one or both nares and antra may result. In selected cases, peroral roentgen ray therapy may be substituted. Otherwise, surgical excision is the procedure of choice; the resulting gap will subsequently have to be closed by a prosthesis.

For lesions of the *soft palate*, treatment consists preferably of peroral roentgen ray therapy, alone or in combination with interstitial radiation, using radium needles, or radon seeds.

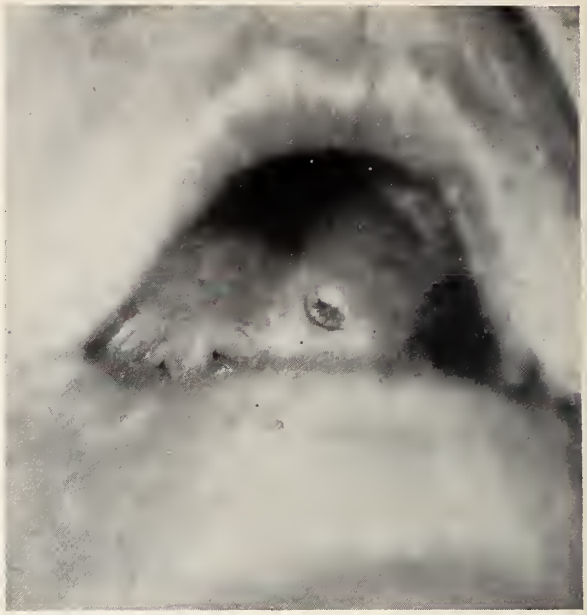


Figure 15. — *Early Cancer.* A crater-like, ulcerated growth, measuring 5.0 mm. in diameter, is seen on the left side of the hard palate. The tumor presents a granular crater with indurated, rolled edges, a characteristic sign of cancer. It is adherent to the periosteum, indicating that invasion through the submucosa has taken place.

Metastatically involved cervical lymph nodes are treated as in the case of cancer of the tongue.

Prognosis: The rate of five-year "cures" in cancer of the hard and soft palate is higher than in malignant involvement in any other portion of the oral cavity. In a series of cases, the number of five-year "cures" amounts to 40 per cent.

"Cancer of the Stomach" by H. Glenn Bell, M.D., Chapter XVIII of the California Cancer Commission Studies, will appear in this section of the July number of CALIFORNIA MEDICINE.

California MEDICINE

OWNED AND PUBLISHED BY THE CALIFORNIA MEDICAL ASSOCIATION
450 SUTTER, SAN FRANCISCO 8 PHONE DOUGLAS 2-0062

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For Information on Preparation of Manuscript, See Advertising Page 2

EDITORIALS

The "Easy Bruiser" and Medical Care Plans

So many statistics have been issued and so much written on the subject of health insurance plans in England, Germany and other faraway places that most of us develop a feeling of quiet desperation when such literature reaches our desks, and treat it accordingly. Statistics can be as dull as invoices, and frequently are. However, taken as individuals, people interest physicians. It is for this very reason that most of us select medicine as a profession.

In light of that interest, what do we know about how our neighbors right here in California react to access to medical care when it is provided on a fixed prepayment basis?

As California Physicians' Service has been in existence since 1939 and now has more than half a million beneficiary members, it can be considered well beyond the pilot plant stage, and its experience therefore representative. One important revelation has been the tremendous increase in the amount of medical care sought by members immediately after they subscribe to the plan. This remarkable rise, it was thought in the early days of C.P.S., would be reversed as soon as new members had had their hernias repaired and their tonsillectomies done. Not so, however, and adjustments in the plan became necessary.

It seems to be human nature to want to get "money's worth" out of anything that is paid for in anticipation of need, and this sometimes means that a few in whom this urge is more than ordinarily aggressive get much more service than others, although all pay equally. In California Physicians' Service (and there is no reason to believe it is different with other plans for anticipating medical care costs) there have been times when a mere 10 per cent of the beneficiaries used a full 40 per cent of the funds paid in by all members. Because such people, aptly designated "easy bruisers," ran to the doctor with all sorts of minor ailments and complaints, only a little more than half the funds remained to care for the other 90 per cent of beneficiary members.

Any plan that makes it easier to call a physician out at night to deliver an aspirin, because it is easier than going to the drug store and costs less, is likely to be abused. As a possible solution to such abuses, the two-visit deductible plan was evolved on the theory that, while an employed patient could pay for the first two visits without hardship, the "easy bruiser" would be given pause and the funds paid in by all beneficiaries thereby protected.

Other beneficiaries who get considerably more than a pro rata share of service are the "thick history" patients. Knowing that the bills are to be paid from funds to which many others as well as they themselves contribute, they go from doctor to doctor, and their diagnoses change with their symptoms.

Some patients seem to believe that the plan owes them much more than a reasonable share. One woman complained bitterly about the three-month limitation of services which is provided in the C.P.S. contract.

A three-month limitation is designed to eliminate inordinate claims by a relatively few individuals upon funds contributed by the entire membership. Patients with long and disabling illnesses, such as tuberculosis and osteomyelitis, who normally are taken care of by public institutions after the original diagnosis is made, are thus likewise eliminated.

In any plan such as that offered by C.P.S., constant vigilance is necessary to prevent some patients (and, we admit with regret, some doctors, too) from taking an unreasonable share of available funds. Fortunately, since C.P.S. is our own plan, we do not have to appeal to politicians or to a government bureau, or even to a private insurance company, to make adjustments that will provide a reasonable balance in the distribution of medical care among the members who have paid for it.

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NOTICES AND REPORTS

C.M.A. Postgraduate Seminar Program Receives Added Impetus From Annual Convention of C.M.A.

1. *Postgraduate Activities Committee Conference.*

A conference of the deans and representatives from the five medical schools, the C.M.A. Cancer Commission, the Heart and Tuberculosis Association, and state and county medical societies was held Tuesday, April 13. at the invitation of the C.M.A. Postgraduate Activities Committee.

John C. Ruddock, M.D., chairman of the Postgraduate Activities Committee, outlined the present program of one-day seminars to be offered to physicians practicing in the vicinities of 15 selected towns outside the teaching centers. It was stressed that the Committee wishes to coordinate and assist all existing postgraduate programs functioning at present and to present programs which will be practical and, insofar as possible, on subjects chosen by the physicians who are to attend the seminars.

All those attending the conference commended the basic idea although there was a variety of opinions as to details. The question of stimulating and maintaining interest in the seminars received much discussion. It was generally agreed that success depended upon promoting the interest of the local physician and county societies by direct and repeated contacts to assist in planning as well as producing the programs. The consensus was that the desire of the participating physician is for "streamlined, practical presentation." It was pointed out in this respect that academic and technical papers and theoretical approaches with extensive statistics and slides of complicated formulae "usually put 75 per cent of the audience to sleep." There was agreement that proper correlation of the various groups and interests can develop an excellent and much needed program.

2. *Special Session on Postgraduate Education.*

Three papers pertaining to this subject were read at the Special Session on Postgraduate Medical Education Wednesday afternoon, April 14. George F. Lull, M.D., secretary and general manager of the A.M.A., presented the information available from the Council on Medical Education and Hospitals of the A.M.A. His closing remarks: "It would appear that more state societies are taking definite steps to insure that a continuing program of postgraduate training is made available to the physicians in their states. . . . They are in a position to mobilize all educational personnel and facilities in the state; if necessary they can bring in teachers from other states without difficulty; and they usually have means for giving effective publicity to the courses that are offered. . . . Most state societies . . . assign the responsibility . . . to a committee [of physicians] who have a real interest in postgraduate education and whose training and experience qualify them for this work."

Ward Darley, M.D., Dean of the University of Colorado School of Medicine, described the graduate and postgraduate training program developed recently in Colorado. He emphasized the timeliness of re-evaluating the aims of medical education and medical service. This position is based on the premises that (1) there is an imbalance in distribution of medical care and physicians due to concentration in larger towns and to a disproportion between specialists and general practitioners and (2) the "depersonalization" of medical practice.

The University of Colorado has recently inaugurated a department of general practice and has revised the course of study "to present medicine as human biology . . . stressing the importance of preventive medicine . . . of diagnosis . . . of recognizing their [the doctors'] limitations and calling for special consultation for the patient's best welfare . . . prevention of disability and chronicity . . . and the value of good rehabilitation . . . and continuing medical care of the ambulatory patient." Graduate training for general practice consists of a two-year internship together with an optional three-year residency. Two to two and one-half years is spent at the University Hospital. The remaining years are to be spent in approved, rural hospitals under supervision of the University department of graduate and postgraduate education.

The University's postgraduate program is now arranged at the request of local, regional and special groups, and individuals are taken as observation students in specialty clinics. Dr. Darley reported that psychosomatic medicine is a particularly popular subject.

Dr. Darley stressed that "the general practitioner should be the core of our medical care . . . qualified to diagnose and treat the patient, referring him to a specialist only occasionally when the situation requires it. . . . The scientific side of medicine has become so foremost that the physician has lost sight of the humanistic and socialistic (not political) sides of his work in the community. . . . It is important that he realize the problems in his community and attempt to solve them."

In a paper on "The New Postgraduate Program of the C.M.A." Carroll B. Andrews, M.D., director of the program, said that in California there are approximately 2,750 physicians (about 30 per cent of the total C.M.A. membership) practicing in areas not easily accessible to the medical teaching centers. It is for them that the present seminar program is designed. Fifteen towns in outlying sections of the state have been designated as centers for the seminars. Tentative full day programs to cover the various subjects in medicine, surgery and specialties are being developed. The material is to be presented on a practical basis for a full-day program by combining ward rounds, clinical conferences, motion pictures, panel discussions and lectures. Every effort is being made to correlate and coordinate the seminar program with the existing postgraduate courses and symposia of the medical schools, specialty groups and hospitals throughout the state. Effort will be required to encourage the development of local postgraduate study groups to fill the interim between seminars. "The successful perpetuation of this extensive program necessarily rests with the proper coordination and utilization of the Postgraduate Committee organization by the individual physicians, the component county societies and the entire body of organized medicine in California," Dr. Andrews said.

3. *Announcement.*

A seminar arranged by the C.M.A. Postgraduate Committee will be held in Santa Rosa, Friday, June 18, 1948, at the Sonoma County Hospital. The subject: "Benign Gastro-Entero-Colic Diseases." The faculty will consist of an internist, a surgeon and a radiologist. Physicians from Sonoma, Marin, Napa, Mendocino and Lake counties are expected to attend.

Minutes of Council Meetings

TENTATIVE DRAFT OF THE MINUTES OF THE 349TH, 350TH, 351ST, 352ND AND 353RD MEETINGS OF THE COUNCIL OF THE CALIFORNIA MEDICAL ASSOCIATION

349th Meeting

The 349th meeting was called to order by Chairman Edwin L. Bruck in Room 210, St. Francis Hotel, San Francisco, at 10 a.m., Saturday, April 10, 1948.

1. *Roll Call:*

Present were President Cline, President-Elect Askey, Speaker Alesen, Vice-Speaker Charnock, Councilors Bruck, Shipman, Ball, Crane, Henderson, Anderson, Kneeshaw, Lum, MacDonald, Green, Cherry, MacLean, Hoffman, Bailey, and Thompson, Secretary Garland, Editor Wilbur.

Present by invitation were Dr. George F. Lull, Secretary and General Manager of the American Medical Association; John Hunton, Executive Secretary; Howard Hassard, Legal Counsel; William P. Wheeler, Assistant Executive Secretary; Clem Whitaker, Public Relations Counsel; Edward Clancy, assistant to Mr. Whitaker; Dr. Dwight H. Murray, Chairman of Public Policy and Legislation; Ben H. Read, Executive Secretary of the Public Health League of California; county society executive secretaries Frank Kihm of San Francisco, Rollen Waterson of Alameda, Joseph Donovan of Santa Clara and Stanley K. Cochems of Los Angeles. Present by invitation during a part of the meeting were Doctors A. E. Moore, Donald Cass, Robertson Ward, J. Frank Doughty and A. M. Meads, all members of the Board of Trustees of California Physicians' Service.

A quorum present and acting.

2. *Approval of Minutes:*

On motion duly made and seconded, minutes of the 348th meeting of the Council, held February 21-22, 1948, were approved.

3. *Membership:*

(a) A report of membership as of April 8, 1948, was received.

(b) On motion duly made and seconded, three (3) members whose 1947 dues had been received since the last previous Council meeting, were voted reinstatement.

(d) On motion duly made and seconded in each case, 14 applicants were elected to Associate Membership. These were:

Eli R. Movitt, Alameda County.
Kenneth W. Haworth, Humboldt County.
Fremont E. Davis, Kern County.
Joseph Maschmeyer, Kern County.
Richard G. Soutar, Sacramento County.
Olive Pippy, San Joaquin County.
Helen Tepper, San Luis Obispo County.
David M. Caldwell, Santa Barbara County.

Percy G. Hamlin, Santa Barbara County.
S. B. Bellinger, Santa Clara County.
E. J. Finnerty, Sonoma County.
Henrietta Frederickson. Sonoma County.
Lida P. Longnecker, Sonoma County.
Josephine Williams, Sonoma County.

(e) On motion duly made and seconded in each case, 10 applicants were elected to Retired Membership. These were:

J. Emmett Clark. Alameda County.
G. H. Armen, Los Angeles County.
Thomas H. Barlow, Los Angeles County.
Joseph M. Berauer, Los Angeles County.
Jesse D. Cook, Los Angeles County.
Norman A. Leake, Los Angeles County.
Ralph A. Woods. Los Angeles County.
James B. Herring. Orange County.
Henry A. Beaudoux. Santa Clara County.
Mark F. Hopkins, Santa Clara County.

(f) On motion duly made and seconded, C. M. Holmes-Brazelton of Alameda County was elected to Life Membership.

A motion was duly made and seconded that Charles A. James of Fresno County be elected to Life Membership. Motion lost. No affirmative votes.

A motion was duly made and seconded that John D. Morgan of Fresno County be elected to Life Membership. Motion lost. No affirmative votes.

On motion duly made and seconded. C. Max Anderson of Los Angeles County was elected to Life Membership.

On motion duly made and seconded, Francis L. Anton of Los Angeles County was elected to Life Membership.

On motion duly made and seconded, Irving R. Bancroft of Los Angeles County was elected to Life Membership.

On motion duly made and seconded, C. W. Bonynge of Los Angeles County was elected to Life Membership.

A motion was duly made and seconded that Rafe C. Chaffin of Los Angeles County be elected to Life Membership. Motion lost. No affirmative votes.

A motion was duly made and seconded that E. G. Eisen of Los Angeles County be elected to Life Membership. Motion lost. No affirmative votes.

On motion duly made and seconded. L. J. Huff of Los Angeles County was elected to Life Membership.

On motion duly made and seconded, J. W. Kelley of Los Angeles County was elected to Life Membership.

On motion duly made and seconded. J. J. Klick of Sacramento County was elected to Life Membership.

A motion was duly made and seconded that Deon A. Crew of San Luis Obispo County be elected to Life Membership. Motion lost. No affirmative votes.

A motion was duly made and seconded that Martin G. Carter of Los Angeles County be elected to Life Membership. After discussion, it was regularly moved and seconded that the motion be tabled until the next meeting. Motion carried.

On motion duly made and seconded, Packard Thurber of Los Angeles County, who failed of election to Life Membership at the 348th Council meeting, was elected to Life Membership.

A letter from an attorney, written in behalf of Harold M. F. Behneman. an applicant for Life Membership who failed of election at the 348th Council meeting, was considered and on motion duly made and seconded, it was voted that a reply be sent, outlining the interpretation by the Council of Article IV, Section 1(e) of the Constitution, under which the applicant failed to receive sufficient affirmative votes to attain Life Membership.

4. *Financial:*

(a) A report of bank balances as of April 8, 1948, was received.

(b) A report of receipts and expenditures for March and for the nine months ended March 30, 1948. was received and ordered filed.

(c) A balance sheet as of March 31, 1948. was received and ordered filed.

(d) The Executive Secretary reported that $10.000 par value U. S. Treasury Bonds had been retired by call and that $25.000 par value U. S. Treasury 2½ per cent bonds of 1972-1967 had been purchased with these and other available funds of the Trustees of the California Medical Association.

5. *Present Selective Service Proposals:*

The Executive Secretary read a telegram received from the Council on Emergency Medical Service of the American Medical Association. calling attention to a proposed bill in the U. S. Senate to provide for the drafting of physicians under Selective Service. He also reported on a telephone message from Mr. James J. Boyle, Washington representative of The United Public Health League. which indicated that the proposed Senate bill was much more restrictive than a parallel proposed before the Armed Services Committee of the House of Representatives and that the latter proposal appeared to be finding more favor in Congress than the Senate proposal.

On motion duly made and seconded, it was voted that messages be sent to the Armed Services Committee of both houses of Congress and to all California Congressmen, outlining the Association's disapproval of the proposed Senate bill.

6. *Public Relations:*

Mr. Clem Whitaker, public relations counsel, reported that expenditures in the 1947-1948 fiscal year for public relations activities were estimated to amount to about $155,000, or $35,000 less than the $190,000 budget voted for this work for that period.

7. *Committee on Committee Appointments:*

The Chairman appointed Doctors Lum (chairman), MacDonald and Bailey to review the membership of the Standing Committees and to bring in recommendations for appointments needed to fill vacancies.

8. *Legal Department:*

Mr. Hassard called the Council's attention to a Constitutional amendment which would be called up

for a vote by the House of Delegates at this session, in which authority would be granted, if the amendment were passed, to permit the House of Delegates to establish the level of fees to be paid by applicants for life membership. After discussion, it was regularly moved, seconded and voted that the Council add to its report to the House of Delegates the recommendation that this Constitutional amendment, if adopted, carry with it the approval of the House of Delegates that fees for life membership applicants between the ages of 50 and 60 years of age be set at ten times the annual active membership dues, for applicants over 60 but less than 65 years of age at seven times the annual active dues, for applicants over 65 but less than 70 years of age at three and one-half times the annual active membership dues and for applicants over 70 years of age, no fee would be required.

Mr. Hassard also called attention to a pending Constitutional amendment which would permit the reduction of dues for special classifications of membership and pointed out that this amendment, if adopted, would require authorization by the House of Delegates to fix the annual dues for such cases. It was regularly moved, seconded and voted that the Council suggest to the House of Delegates that authority to fix reduced dues for such additional classifications of membership be delegated to the Council.

Mr. Hassard called attention to a third pending Constitutional amendment which would provide for the establishment of classifications of membership for undergraduate students, interns, residents and House officers, and pointed out that this amendment, if adopted, would require the working out of details to govern the rights, privileges and dues of such members. On motion duly made and seconded, it was voted that the Council suggest to the House of Delegates that a reference committee of the House of Delegates be appointed to study this matter and to work out the details for such membership classifications for application in the event the proposed Constitutional amendment were adopted.

9. *California Physicians' Service:*

Dr. C. L. Cooley, Secretary, and Mr. William M. Bowman, Executive Director of C.P.S., reported that for the 11 months ended February 29, 1948, C.P.S. had received a gross income of $11,400,000, that its bank balances on February 29, 1948, totaled $1,009,000 and that its Unit Stabilization Fund (surplus) on the same date was $162,501. Membership as of April 1, 1948, was more than 537,000.

Mr. Bowman stated that the Board of Trustees had approved the principle of individual contracts for self-employers or for groups of less than five people and such contracts should be ready for presentation within 60 days. He also reported that C.P.S. is working on a plan under which indigent patients in Santa Barbara County would be taken care of under a C.P.S. contract and that plans for this purpose, to apply in Santa Barbara and elsewhere, were expected to be completed soon.

10. *New Mexico Physicians' Service:*

Discussion was had on the loan made to New Mexico Physicians' Service, the reasons for it, the duration and the anticipated repayment beyond the $500 previously received and reported. It was regularly moved, seconded and voted that an item outlining these factors be prepared as an addition to the report of the Council to the House of Delegates.

11. *Preparation of Manual on Joint Dysfunction:*

Dr. Packard Thurber appeared before the Council and outlined his earlier proposal that the Association recognize his proposed preparation of a manual to standardize the terminology and evaluation of cases of joint dysfunction in industrial injury cases. He pointed to the value of such a manual to the entire profession and stated his belief that no individual member should proceed in this task unless he had some official support by the profession of the state. After discussion it was regularly moved, seconded and voted that this matter be referred to the Standing Committee on Industrial Practice and that this committee be granted authority to appoint a subcommittee to undertake this project.

12. *Blood Bank Commission:*

Dr. Bruck announced that the Blood Bank Commission would meet during the Annual Session. Dr. Green reported that he had attended a meeting of the A.M.A. Blood Bank Committee, of which he is a member, that this committee had studied all phases of the American National Red Cross blood bank program and had reported to the A.M.A. Board of Trustees but was not yet prepared to report to the profession pending action by the A.M.A. Trustees.

13. *State Department of Public Health:*

Dr. Bruck reported on a meeting of the committee established by the State Department of Public Health to study the proposed chronic disease program. He also reported on a proposed study of chronic alcoholism, and on motion duly made and seconded, it was voted that the Council recommend to the House of Delegates the establishment of a committee to study chronic alcoholism, such committee to include representatives of the Association, of the State Department of Public Health, and of church, labor and agricultural groups.

On motion by Shipman, seconded by Green, it was voted that the Executive Committee be empowered to meet with the State Director of Public Health in an effort to establish an approved boundary line between public health functions and the private practice of medicine, the Executive Committee to report back to the Council.

14. *California Medicine:*

Mr. Hunton presented a set of principles adopted by the Advertising Committee to govern the acceptance of advertising of products not approved by the various Councils of the American Medical Association and on motion duly made and seconded, these principles were approved. At the request of the Ad-

vertising Committee, it was regularly moved, seconded and voted that additional members be appointed to this committee from the Southern California area, for either active membership or for consultation.

15. *Addenda to Report of the Council:*

(a) On motion duly made and seconded, the Council voted to accept as an addition to its report to the House of Delegates a statement incorporating the fees for life membership mentioned in Item 8, above.

(b) On motion duly made and seconded, it was voted to accept as an addition to the report of the Council a statement submitted by Doctor Askey relative to New Mexico Physicians' Service.

(c) On motion duly made and seconded, a proposed By-Law amendment covering membership where residence and principal place of practice are different (Chapter II, Section 9(c)) was approved as an addition to the report of the Council.

(d) On motion duly made and seconded a resolution to memorialize the House of Delegates of the American Medical Association to work for a better utilization of medical officers in the event of future armed conflicts, was adopted as an addition to the report of the Council.

(e) On motion duly made and seconded, it was voted to add to the report of the Council a proposed By-Law amendment to require members who transfer their offices from one county to another to maintain membership in the county society into which area they move. (Chapter II, Section 10.)

(f) On motion duly made and seconded, it was voted to add to the report of the Council a proposed By-Law amendment to require the naming of an additional Reference Committee by the House of Delegates, to consider financial reports, budgets and the level of Association dues.

(These additions to the report of the Council appear verbatim in the transcript of the first meeting of the House of Delegates, 1948 Annual Session.)

16. *Time and Place of Next Meeting:*

It was agreed to meet at 7:40 a.m., Sunday, April 11, 1948, in Room 220, St. Francis Hotel, for the 350th meeting of the Council.

EDWIN L. BRUCK, M.D., *Chairman*
L. HENRY GARLAND, M.D., *Secretary*

350th Meeting

The 350th meeting was called to order by the Chairman at 7:30 a.m. in Room 220, St. Francis Hotel, San Francisco, Sunday, April 11, 1948.

1. *Roll Call:*

Present were President Cline, President-Elect Askey, Speaker Alesen, Vice-Speaker Charnock, Councilors Bruck, Shipman, Ball, Crane, Henderson, Anderson, Kneeshaw, Lum, MacDonald, Green, Cherry, MacLean, Hoffman and Thompson. Secretary Garland and Editor Wilbur. Present by invitation were Dr. George F. Lull, Secretary of the American Medical Association; Dr. D. H. Murray, Chairman of Public Policy and Legislation; Executive Secretary Hunton; Legal Counsel Hassard; Public Relations Counsel Whitaker; Mr. Ed Clancy, assistant to Mr. Whitaker, and Mr. Ben H. Read, Executive Secretary of the Public Health League of California.

A quorum present and acting.

2. *California Society for Crippled Children:*

The Chairman reported on conferences which had been held with representatives of the California Society for Crippled Children, which had previously sought approval of the Council for a proposed clinic program for epileptics. It was regularly moved, seconded and voted that a committee be appointed to study this matter and report back to the Council during this annual session.

3. *Public Policy and Legislation:*

Dr. Murray and Mr. Read reported on the current legislative outlook and pointed out that the 1948 budget session of the State Legislature had defeated in committee a proposed constitutional amendment which would have placed before the voters a proposal to establish a system of state-operated health insurance. They also pointed to the importance of the medical profession's taking an interest in the coming elections of 80 Assemblymen, 20 Senators and 23 members of Congress.

4. *Addenda to Council Report:*

The Chairman read the addenda to the report of the Council to the House of Delegates (appearing in full in the transcript of the House of Delegates) and it was regularly moved, seconded and voted that these addenda be approved and presented to the House of Delegates.

5. *Los Angeles Office for California Medical Association:*

Discussion was had concerning advisability of the Association's maintaining a branch office in Los Angeles for the use of the executive secretary, legal counsel, advertising representative and other officers or employees. The executive secretary, in response to questions, stated that such an office could be maintained at a moderate expense and would be useful in the work of the office staff and other representatives of the Association. It was regularly moved, seconded and voted that a branch office of the Association be opened in Los Angeles.

EDWIN L. BRUCK, M.D., *Chairman*
L. HENRY GARLAND, M.D., *Secretary*

351st Meeting

The 351st meeting was called to order by the Chairman at 7:30 a.m. in Room 220, St. Francis Hotel, San Francisco, Monday, April 12, 1948.

1. *Roll Call:*

Present were President Cline, President-Elect Askey, Speaker Alesen, Vice-Speaker Charnock,

Councilors Bruck, Shipman, Ball, Crane, Henderson, Anderson, Kneeshaw, Lum, MacDonald, Green, Cherry, MacLean, Hoffman, Bailey and Thompson, Secretary Garland and Editor Wilbur.

Present by invitation were Dr. George F. Lull, Secretary of the American Medical Association; Executive Secretary Hunton, Legal Counsel Hassard, Dr. Dwight H. Murray, Chairman of Public Policy and Legislation; Mr. Ben Read, Executive Secretary of the Public Health League of California, and County Executive Secretaries Joseph Donovan of Santa Clara and Kenneth C. Young of San Diego.

A quorum present and acting.

2. *Association of Santa Fe Coast Line Physicians:*

Dr. Paul Tully, representing the Association of Santa Fe Coast Line Physicians, reviewed the situation in which his association finds itself in dealing with the directors of the Santa Fe Hospital Association in Los Angeles. Doctors Murray and Lull participated in the discussion, particularly in connection with the relationship of the hospital to the Council on Medical Education and Hospitals of the A.M.A., and Mr. Hassard told of the legal steps taken to date to assist the physicians. After discussion, it was regularly moved, seconded and voted that Doctors Askey, Alesen and Bailey should prepare a letter to be sent to the Santa Fe Hospital Association and that Doctor Askey appoint a committee to meet with the Santa Fe physicians and report back to the Council.

3. *Cancer Commission:*

Dr. Lyell C. Kinney, Chairman of the Cancer Commission, discussed the problems arising out of cases referred to established Tumor Boards by osteopaths and chiropractors. The Cancer Commission wished the advice of the Council in such cases, particularly as to whether such cases might be handled by the Tumor Boards and referred back to their referring osteopath or chiropractor; also, in the case of osteopaths, should the Tumor Board permit the osteopath to accompany the patient to the Tumor Board?

After discussion, it was regularly moved, seconded and voted that the Council could not go on record as approving osteopathic participation in the activities of Tumor Boards, particularly since these boards are considered a part of the staffs of hospitals. It was also voted that chiropractors should receive no standing in the activities of these boards.

4. *Budget for 1948-1949 Fiscal Year:*

Dr. Shipman, Chairman of the Auditing Committee, presented a proposed budget for the fiscal year starting July 1, 1948. This was discussed, item by item. As a part of the budget the Council adopted the proposed budget of public relations counsel, calling for the expenditure of $146,000, granted an increase from $1,000 to $2,000 for illustrations for California Medicine, and approved an allotment of $4,500 for additional expenses of the legal department. In considering estimated income for the fiscal year, discussion was had on the level of dues to be recommended to the House of Delegates for the 1949 calendar year, and it was regularly moved, seconded and voted that 1949 dues be recommended to the House of Delegates at $50 for active members. Doctors Cherry and Thompson were recorded as voting against this recommendation.

On motion regularly made and seconded, the proposed budget for the 1948-1949 fiscal year was approved as amended and ordered reproduced for distribution to the members of the House of Delegates.

5. *Meeting Place for 1949:*

Invitations from Los Angeles, Palm Springs and Santa Cruz were presented for consideration in selecting a meeting place for 1949. After discussion it was regularly moved, seconded and voted that Los Angeles be the site of the 1949 Annual Session. It was further voted that the Executive Secretary during the coming year review the meeting facilities of all potential meeting places in order to ascertain if such facilities could handle the Association's Annual Session.

6. *Shearon Legislative Service:*

A request was presented that copies of the legislative bulletin service issued by Dr. Marjorie Shearon in Washington be made available to the deans of the medical schools in California. It was agreed that several copies of each weekly issue be sent to the deans out of the quantity available to the Association under its present subscription arrangement.

7. *Retirement Program for Association Employees:*

Dr. Charnock reported on the study made by his committee on proposed retirement pension plans for Association employees. After discussion, it was regularly moved, seconded and voted that a retirement plan be instituted on an insurance basis at an initial cost of somewhat over $2,000 to cover employees with five or more years of service and to add those who reach five years of employment at a later date, it being understood that Doctor Charnock's committee should select the insurance carrier.

8. *Member of Fifty Years' Standing:*

On motion duly made and seconded, it was voted that members who had maintained membership in the Association for fifty years or more should be given special recognition and emblems to signify such membership.

9. *Stanislaus County Medical Society:*

A letter to the Council from officers and members of the Stanislaus County Medical Society, stating the loyalty of the members of the society to the Association, was discussed and it was regularly moved, seconded and voted that a reply be sent, thanking these members for their resolution and expressing appreciation for their expression of loyalty.

Edwin L. Bruck, M.D., *Chairman*
L. Henry Garland, M.D., *Secretary*

352nd Meeting

The 352nd meeting was called to order by the Chairman at 7:30 a.m. in Room 220, St. Francis Hotel, San Francisco, Tuesday, April 13, 1948.

1. *Roll Call:*

Present were President Cline, President-Elect Askey, Speaker Alesen, Vice-Speaker Charnock, Councilors Bruck, Shipman, Ball, Crane, Henderson, Anderson, Kneeshaw, Lum, MacDonald, Green, Cherry, MacLean, Hoffman, Bailey and Thompson, Secretary Garland and Editor Wilbur.

Present by invitation were Dr. George F. Lull, Secretary of the American Medical Association; Executive Secretary Hunton; Legal Counsel Hassard; Dr. Dwight H. Murray, Chairman of Public Policy and Legislation; Mr. Ben H. Read, Executive Secretary of the Public Health League of California, and county society executive secretaries Joseph Donovan of Santa Clara and Kenneth C. Young of San Diego.

A quorum present and acting.

2. *Palo Alto Clinic:*

Mr. Hassard was asked to report on his study of the contract proposed by the Palo Alto Clinic for execution with the Menlo School and Junior College, under which medical care would be provided for students of the schools by physicians in the immediate vicinity under an arrangement whereby the Palo Alto Clinic would assume charge of collecting funds and paying all participating physicians. Approval in principle of this contract had previously been expressed by both the Santa Clara County and San Mateo County Medical Societies.

On motion duly made and seconded, it was voted that the sense of the Council be that the contract be approved but that attention be called to the fact that financial details were lacking or meagerly covered in the contract and that such details were a matter of prime concern to those who proposed to provide the service. The Executive Committee was authorized to approve this contract *if* it is satisfactory to the county medical societies involved.

3. *Appointments to Standing Committees:*

Dr. Lum presented the nominations made by his special committee for appointments to Standing Committees and it was duly moved, seconded and voted that these appointments be approved and presented as a report to the House of Delegates.

4. *Committee on Industrial Health:*

The Chairman announced the appointment of members to the Committee on Industrial Health, which had previously been approved by the Council as a special committee. Chairman of this committee is Dr. Christopher Leggo of Contra Costa County, and members are Doctors A. B. Carson of Alameda County and Louis D. Cheney of Los Angeles County. These appointments were confirmed by the Council.

5. *Blood Bank Commission:*

The Chairman announced appointments to the Blood Bank Commission. Dr. John R. Upton of San Francisco was named as chairman and the following as members of the commission: DeWitt Burnham of San Francisco, George F. Paap of Long Beach, E. R. Evans of Los Angeles, Dudley Saeltzer of Sacramento, Malcolm Merrill of the State Department of Public Health, John W. Green of Vallejo, Donald Harrington of Stockton, John O. Eccleston of Stockton, C. E. Bates of the American Legion, K. Howorth of Eureka, W. H. Geistweit, Jr., of San Diego, E. D. Sorsky of Fresno, R. G. Frey of Red Bluff, E. Richmond Ware of Los Angeles and Gerald K. Ridge of Ventura.

Adjournment.

EDWIN L. BRUCK, M.D., *Chairman*
L. HENRY GARLAND, M.D., *Secretary*

353rd Meeting

The 353rd meeting was called to order by Chairman Bruck at 8 a.m., Wednesday, April 14, 1948, in Room 220, St. Francis Hotel, San Francisco.

1. *Roll Call:*

Present were President Askey, President-Elect Kneeshaw, Speaker Alesen, Vice-Speaker Charnock, Councilors Bruck, Shipman, Ball, Crane, Henderson, Anderson, Lum, Green, Cherry, MacLean, Hoffman, Bailey, and Thompson, Secretary Garland and Editor Wilbur. New Councilors present: Hartzell Ray, Fifth District, and Wayne Pollock, Eighth District.

Present by invitation were Dr. Dwight H. Murray, Chairman of Public Policy and Legislation; Mr. Ben Read, Executive Secretary of the Public Health League of California; Executive Secretary Hunton, Legal Counsel Hassard. Present by special invitation was Dr. John W. Cline, immediate past president.

A quorum present and acting.

2. *Organization of Council:*

Chairman Bruck assumed the Chair in the absence of a chairman for the newly constituted Council.

On nomination made and seconded, Dr. Edwin L. Bruck was unanimously elected Chairman of the Council.

On nomination made and seconded, Dr. Sidney J. Shipman was unanimously elected Vice-Chairman of the Council.

On motion duly made and seconded, Dr. Dwight L. Wilbur was unanimously appointed Editor of CALIFORNIA MEDICINE.

On motion duly made and seconded, Dr. L. Henry Garland was unanimously appointed Secretary-Treasurer.

On motion duly made and seconded, Peart, Baraty & Hassard were unanimously retained as legal counsel.

3. *Appointment of Auditing Committee:*

The Chairman announced the appointment of the Auditing Committee for the ensuing year, to consist

of Sidney J. Shipman as Chairman, H. Gordon MacLean and Donald D. Lum.

4. *Farewell of Outgoing President:*

Dr. Cline made his farewell to the Council, offered his thanks for the help given him by all Councilors and wished the best for his successor.

5. *Executive Session:*

On motion duly made and seconded, the Council went into executive session. Dr. Garland expressed his thanks to the Council for renaming him as Secretary-Treasurer but expressed doubt as to his ability to devote to this work the time he felt necessary to do justice to the position. In view of other demands upon his time (teaching clinical radiology, officer of the Radiological Society of North America, etc.) he asked permission to tender his resignation. After discussion, it was moved, seconded and unanimously voted that Dr. Garland's resignation be accepted with regret, with the understanding that he would continue to serve as Secretary-Treasurer until a successor should be named.

At this point the Council rose from executive session.

6. *California School Health Conference:*

Dr. Anderson reported on a school health conference sponsored by the State Department of Education, which he had attended as an Association representative. A full report of the conference is to be furnished to Dr. Anderson when available and thus made available to the Council.

7. *Time and Place of Next Meeting:*

It was agreed to hold the next Council meeting in Los Angeles on June 5 and 6, 1948.

Adjournment.

EDWIN L. BRUCK, M.D., *Chairman*
L. HENRY GARLAND, M.D., *Secretary*

C.M.A. House of Delegates Proceedings

FIRST MEETING OF THE 45th ANNUAL SESSION
San Francisco, Sunday, April 11, 1948

The first meeting of the House of Delegates of the California Medical Association convened in the Empire Room, Sir Francis Drake Hotel, San Francisco, California, at 7:00 o'clock p.m., Speaker L. A. Alesen presiding.

SPEAKER ALESEN: Will the House of Delegates please come to order. Would you gentlemen in the rear please be seated?

The Chair recognizes Dr. O. R. Myers of Humboldt County, chairman of the Committee on Credentials. Dr. Myers, have you a quorum in the house?

DR. MYERS: Mr. Speaker, we have registered 128 duly qualified delegates in the House of Delegates.

SPEAKER ALESEN: Thank you. A motion is in order to accept the report of the Credentials Committee as constituted in this House at this time.

(Motion was made, seconded and carried to accept the report of the Committee on Credentials.)

SPEAKER ALESEN: The House of Delegates is duly constituted. As has been the custom, we will dispense with the roll-call at the first meeting of the session.

In accordance with the constitution, the following reference committees have been appointed:

Committee on Credentials: O. R. Myers, of Humboldt County, chairman; J. E. Young of Fresno County; Neill Johnson of San Joaquin County.

Reference Committee No. 1, on the reports of Officers, Standing and Special Committees: Benjamin Frees of Los Angeles County, chairman; J. Frank Doughty of San Joaquin County; J. Needham Martin, San Bernardino County.

Reference Committee No. 2, report of the Council, report of the Secretary-Treasurer, report of the Executive Secretary: William G. Donald of Alameda County, chairman; Frank Reardon of Sacramento County; F. Powers Heald of Imperial County.

Reference Committee No. 3, resolutions, amendments to the Constitution and By-Laws, and new and miscellaneous business: Robertson Ward of San Francisco County, chairman; Frank F. Schade of Los Angeles County; Francis E. Jacobs of San Diego County.

If the House has no objections, these committees will stand and function as appointed.

There has been a little change in the agenda—the order of business as published in your Pre-Convention Bulletin. The council had set aside this time for us to have some remarks from the Secretary and General Manager of the American Medical Association. Certainly, ladies and gentlemen of the House of Delegates, we need make no introduction of the man who is about to address you. Dr. Lull has conferred upon us a great honor by coming from Chicago to be with us at this time. It is a pleasure to welcome Dr. George Lull, secretary and general manager of the American Medical Association. (Applause.)

DR. GEORGE LULL: Mr. Speaker, Members of the House of Delegates of the California Medical Association, and guests.

I appreciate having received an invitation to visit the annual meeting of the California State Medical Association. As I remarked at the general meeting this morning, my contacts with the California Medical Association are with your officers and with your very able representatives in our House of Delegates.

I know all of them, as I have not only come in contact with them since my being employed as Secretary and General Manager, but previous to this, when I was a member of the National House of Delegates as the delegate from the Army.

I have visited a great many state societies since I have assumed the office of Secretary and General Manager. I have not yet reached that point of "savoir faire" where I am not surprised by anything, because all of these organizations are somewhat different.

Speaking of "savoir faire," you have probably read the story about the definition of "savoir faire." Three Frenchmen were talking to an American G.I. in Paris, and during the conversation the G.I. said, "There is a term which we sometimes use in English, and I would like to know the exact meaning of 'savoir faire'." The first Frenchman said, "Well, you see, it is this way: If you come home and you find a strange man kissing your wife, you tip your hat and say, 'Excuse me.' That is savoir faire." Frenchman No. 2 said, "No, no, Jacques, you are wrong. If you come home and see a strange man kissing your wife and you tip your hat and say, 'Excuse me, continue,' that is savoir faire." The third Frenchman said, "You are both wrong. If you find a strange man kissing your wife and you say, 'Excuse me, please continue,' and he can do it, *he* has savoir faire."

So I have not yet reached that point.

As you all know, these are times in the history of organized medicine in the United States when we have serious things ahead of us. It is a time that calls for unity of action, because unity of action shows strength.

This morning in the address of your very able president—the address was a gem as far as presidential addresses are concerned—the fact was brought home to me that we have one victory won against political domination of our profession. But this victory is not a total victory; it simply places us in a position where we are fighting not necessarily a delaying action, but, having won one fight, we await another attack. And that attack will surely come, because any move to collectivize our system of government will start with an attempt to collectivize the medical profession. There are many bills before Congress at the present time which would tend to do this. The Wagner-Murray-Dingell bill may be dead for this session, but it is not dead and buried for keeps. The Taft bill is another bill which, as you know, the American Medical Association approved in principle only. As a matter of fact, if you read the bill, you will wonder how any provisions of the bill are going to be carried out; but it was necessary to introduce a bill which would be opposed to the Wagner-Murray-Dingell Bill.

The fact that one of the bills introduced in Congress calls for a Department of Health, Education and Social Security, with a cabinet officer to head it, is significant. We do not feel that the bill will pass, because I don't think a Republican Congress would stand for the appointment of another Democrat as a cabinet officer. It is a stand-off. However, this will loom up again, we believe. It has the backing of certain Republicans.

As you know, your national House of Delegates went on record as far back as 1886 as being in favor of a Department of Health, with a cabinet officer at the head of it. However, they never contemplated including education, nor certainly the Federal Social Security Group which would be in along with these other two, health and education.

I sat in on some of the hearings conducted unofficially on this bill. We opposed it because of the reasons stated. One time while giving a talk at a meeting of some social workers, I was asked by Albert Deutsch, of *P.M.*, why the American Medical Association opposed having health considered by the Government as being of cabinet rank. I replied that we did not oppose the health affairs of the country being placed in a department of cabinet rank, and that in fact, we did not very seriously oppose having a Department of Education as our bed-fellow; but we did not want to be involved with any of the social security group, because if the social security group were to be a part of a governmental department, it would plan to dominate it. I have already seen that group's plans; the social security set-up would be the top level component all the way through, and the health and education would be simply small compartments down in the corner.

I don't want to take up the time of this House by rambling on, except to tell you that we hope to keep a somewhat closer liaison with the state medical associations and keep informed of your doings here. That was my thought a year ago when I started the "Secretary's Letter." I wanted to let people know about the little things that were happening in headquarters. There were lots of things going on there; there are many things you never hear about until your delegates go to your annual meeting. We want to keep the field informed of some of the smaller things that may be relatively unimportant in themselves, but, taken collectively, are of importance and interest to all of you people who are interested in organized medicine. And all those who are here tonight are interested in organized medicine.

I want to repeat that I appreciate being invited out here to be with you for this meeting. Thank you very much. (Applause.)

SPEAKER ALESEN: Thank you, Dr. Lull.

It is a bit like carrying coals to Newcastle to introduce the next speaker of this House of Delegates, Dr. John W. Cline, president of the California Medical Association. (Applause.)

DR. CLINE: Mr. Speaker, Members of the House of Delegates, I took the time of the general meeting this morning to speak most of the things I had in my mind. There is also in the published program the report of the President, so at this time I shall not take further time to speak before the House of Delegates. Thank you very much. (Applause.)

SPEAKER ALESEN: We shall now proceed to the reports. First, the report of the Chairman of the Council, by Dr. Edwin L. Bruck, chairman.

DR. BRUCK: Mr. Speaker and Members of the House of Delegates, the report of the Council is published in the Pre-Convention Bulletin on pages 9, 10 and 11, and I am sure many or most of you have already read it. Since that report was written there have been certain addenda, which I will now read to you.

In the first item, the Council calls to your attention that one of the constitutional amendments to be voted on at this session, referring to the reduction of membership dues during temporary illness, postgraduate study, or the earlier years of a physician's practice, if adopted, would require a designation, either by the House itself, or by delegation of authority to the Council, of the amount of the reduction and the procedure for obtaining same. The Council recommends that such authority be delegated to the Council by the House of Delegates, so that changing conditions may be taken into consideration from year to year.

Second, another constitutional amendment pending before the House of Delegates permits limited membership to qualified undergraduate students, interns, residents and house officers. This amendment is worded in such a way that it is not self-operative, and the House of Delegates must implement it by determining the qualifications, duration, dues (if any) and privileges of such limited memberships.

Third, in 1941 the House of Delegates amended the constitution to provide for a new class of membership, called "Life Membership." The amendment specified that life members should be elected by the Council on recommendation of any County Component Society, from active members in good standing who had reached a certain age and who had been members for a certain minimum number of years. The fee for life membership was fixed in the amendment at $150 for those between 50 and 60 at the time of application, $100 for those between 60 and 65, $50 for those between 65 and 70, and nothing for those over 70. When this amendment was adopted, the annual California Medical Association dues averaged about $15 a year, and the dues for some years varied between $10 and $20. The authors of the life membership amendment calculated this $150 for those between 50 and 60 as approximately ten times the average annual dues, and the fee of $100 for those between 60 and 65 as about seven times the average annual dues, and for those between 65 and 70 as between three and four times the average annual dues.

Unfortunately, the constitutional amendment did not give the House of Delegates any authority to change the life membership fee, but instead froze into the constitution the fixed amounts of $150, $100 and $50 for the various age groups. This was unquestionably an oversight at the time; due, no doubt, to the fact that no one then thought that California Medical Association dues would ever increase substantially over the then $20 per year peak. No one in 1941 could foresee that in 1945 a popular governor, elected on a non-partisan basis, would team up with left-wing elements and incorporate as his major proposal in his annual message to the Legislature a demand that California embark on a compulsory health insurance scheme. No one could foretell in 1941 that in 1945 and in the following years, the medical profession would be engaged in a life or death struggle to prevent government medicine. As you know, this happened, and it became necessary for the protection of every doctor in this state, against ultimate reduction to the status of a government-paid doctor, that the California Medical Association increase its dues.

Because the life membership fee was frozen into the constitution, it could not be increased by the House of Delegates when annual dues were increased. This left a loop-hole through which active members over 50 years of age could, by recommendation of their county society and by election by the Council, avoid bearing their proper pro rata share of the cost of fighting government medicine.

During 1945, 1946 and a part of 1947, practically no members of this association, except those who, through physical incapacity or maturity of years, had reached the end of their productive days, applied for life membership. Up to January 1, 1947, only nine doctors had applied for life membership out of over 8,000 members of this association, hundreds of whom, by age and length of membership were technically qualified. When the heat was on, the medical profession solidly fought the battle and paid the cost. At the 1947 annual session this Council, feeling that a fixed life-time membership fee in the constitution was inequitable and unjust, sponsored an amendment to the life membership provision to permit the House of Delegates, from year to year, to increase or decrease the life membership fee as current conditions might warrant. This amendment is before you this session for action.

While the amendment, designed to permit the House of Delegates to fix the life membership fee on the basis of current conditions, has been lying on the table, the Council has received applications for life membership from a number of active members in several counties in the state who are still in their producer years and who are not, to the knowledge of the Council, unable to pay their just share of the cost of protecting the independence of medicine. As a matter of fairness to the individual, the Council felt that to grant life memberships to physicians who happen to be over 50 would be inequitable and most unjust to physicians under 50, on whom could be cast the full task of bearing medicine's load. In considering this problem, the Council requested the interpretation of legal counsel of the Association as to the procedure to be followed in electing life members. The legal counsel's opinion was that the Council must act upon each application for life membership submitted to it; also that under the phrase, "Life members shall be elected by the Council," the action of the Council had to be by a regular process of election; that to be elected, an applicant had to receive at least one more affirmative vote than negative votes, and that the election had to be by the

Council and the problem could not be avoided or transferred to the House of Delegates or to any other body of this Association.

Following this procedure the Council has conducted an election with respect to every applicant for life membership, and each councilor has voted according to his own conscience. Many of the applicants for life membership have received favorable votes and have been elected. Some applicants have not been elected. The Council has received official protests from two county societies because of its failure to elect some of these applicants. The Council believes that it acted in each instance in accordance with the best interests of medicine, and that in good conscience, the only honorable action under the circumstances was to preserve the equality of burden on all active members of the Association.

At the same time, the Council recognizes the undesirability of the present inflexible life membership fees contained in the constitution, and urges the House of Delegates to consider carefully the amendment now pending before it. If the amendment is adopted, then the House of Delegates is urged to exercise its power under the new amendment to reset, from year to year, the life membership fee. In this connection the Council recommends that if the pending constitutional amendment is adopted, the House of Delegates, at the second meeting of this session, to be held on April 13, fix the life membership fee for those members elected to life membership during the ensuing year at ten times the amount of the annual dues for 1948 for those applicants over 50 and under 60 years of age, seven times the 1948 annual dues for those applicants from 60 to 65 years of age, and three and one half times the 1948 annual dues for those applicants 65 to 70 years of age. It is further recommended that life membership fees so fixed be applicable to all applicants voted upon by the Council at any time from the adjournment of the House of Delegates at this session to the adjournment of the House of Delegates at the 1949 annual session; and that in the 1949 annual session, life membership fees again be set for the following year by the House of Delegates.

Section No. 4. There have been requests for information regarding the status of the loan of money to the New Mexico Physician's Service. Misunderstandings apparently have been held regarding this matter. At the time that the California Medical Association was most precariously engaged in efforts to combat socialized medicine in our Legislature, and at the same time attempting to develop public relations with a view to establishing prepaid voluntary plans on a firm basis, the California Medical Association Council was approached by representatives of the New Mexico Physician's Service. They stated that they were in the process of contracting with groups in New Mexico. If these groups were obtained, the success of the plan would be assured. However, to do this, the groups demanded evidence that the New Mexico Physician's Service would be able to fulfill the contract. A limited amount of money was necessary to guarantee this. If this money was not available at once, it was felt, the whole movement would fail. It was the feeling of the Council that failure of that plan at that strategic time would react disastrously to the interests of our fight against socialized medicine in California. It was therefore decided to loan money to carry them through the emergency as a protective measure as viewed from our California standpoint. The California Medical Association sent its Executive Secretary to survey the situation and determine if the facts were as presented to us. His report confirmed the need. Thereupon funds were loaned on notes received from the New Mexico Physician's Service, on a limited basis. Since that time they have repaid part of the loan, and there is every indication that all the money will be repaid in full, inasmuch as they are now operating in the black and apparently on a firm basis.

The loan of this money, viewed purely as a public relations and policy measure in the interests of the California Medical Association following the direction of the House of Delegates, we believe, was money well loaned. Since the money is being repaid, it will be a valuable service which we will have received at no actual expense. California Physicians' Service had nothing to do with this and never advanced any money to the project. Nor did it instigate the action.

As of April 30, 1948, no more money is committed by the California Medical Association. The total amount loaned was $18,000, and this loan is now at an end.

Item No. 4. The Council has continued to review the official journal, CALIFORNIA MEDICINE, and has approved a stringent set of rules and standards which will serve as criteria for the acceptance of all advertising in the journal. The Council believes that the application of these standards will give CALIFORNIA MEDICINE a standard of advertising content second to none and in keeping with the high professional standard of medicine in California.

Item No. 6. At the suggestion of the Executive Secretary, the Council has under advisement, pending further study and information, the establishment of a branch office of the California Medical Association in Los Angeles.

Item No. 7. The Council has studied various other problems, for which it has prepared resolutions to be presented to this House of Delegates. These resolutions will be presented at the proper time for the introduction of new business.

SPEAKER ALESEN: The report of the Council will be referred to Reference Committee No. 2. Next is the report of the Trustees of the California Medical Association, by Dr. John W. Cline, President.

DR. CLINE: There is no report in addition to that published in the Pre-Convention Bulletin, Mr. Speaker.

SPEAKER ALESEN: Next will be the report of the Auditing Committee by Dr. Shipman, the chairman.

DR. SHIPMAN: No additional report.

SPEAKER ALESEN: These reports will be forwarded to the proper reference committee. The report of the Executive Secretary, Mr. John Hunton.

MR. HUNTON: No additional report. Mr. Speaker.

SPEAKER ALESEN: The report of the Secretary, Dr. L. Henry Garland.

DR. GARLAND: I have no additional report.

SPEAKER ALESEN: We shall proceed further to the report of the Editor, Dr. Dwight L. Wilbur.

DR. WILBUR: No additional report, Mr. Speaker.

SPEAKER ALESEN: The reports of the District Councilors. District No. 1: Dr. Ball, do you have a report?

DR. JOHN D. BALL: No additional report.

SPEAKER ALESEN: District No. 2; Dr. Crane.

DR. JAY J. CRANE: No additional report.

SPEAKER ALESEN: District No. 3: Dr. Henderson?

DR. HARRY E. HENDERSON: No additional report.

SPEAKER ALESEN: Dr. Anderson, District No. 4.

DR. AXCEL E. ANDERSON: No additional report, Mr. Speaker.

SPEAKER ALESEN: District No. 5, Dr. Kneeshaw.

DR. R. STANLEY KNEESHAW: No additional report.

SPEAKER ALESEN: District No. 6; Dr. Bruck.

DR. EDWIN L. BRUCK: No additional report.

SPEAKER ALESEN: District No. 7, Dr. Lum.

DR. DONALD D. LUM: No report.

SPEAKER ALESEN: District No. 8. Dr. MacDonald.

DR. FRANK A. MACDONALD: No additional report.

SPEAKER ALESEN: District No. 9, Dr. Green.

DR. JOHN W. GREEN: No additional report.

SPEAKER ALESEN: And the Councilors-at-Large, Dr. Cherry?

DR. WALTER S. CHERRY: No additional report.

SPEAKER ALESEN: Dr. MacLean?

DR. H. GORDON MACLEAN: No additional report.

SPEAKER ALESEN: Dr. Hoffman?

DR. EUGENE F. HOFFMAN: No additional report.

SPEAKER ALESEN: Dr. Shipman?

DR. SIDNEY J. SHIPMAN: No additional report.

SPEAKER ALESEN: Dr. Bailey? (No response.)

SPEAKER ALESEN: Dr. C. V. Thompson?

DR. C. V. THOMPSON: No report in addition to that already published.

SPEAKER ALESEN: Now at this time we will have the reports of the Standing Committees. First the Executive Committee. Dr. Shipman?

DR. SIDNEY J. SHIPMAN: No additional report.

SPEAKER ALESEN: And the report of the legal counsel, Mr. Hassard.

MR. HOWARD HASSARD: I will break the continuity, Mr. Speaker; I have a supplemental report.

Mr. Speaker and Members of the House of Delegates, our report in the Pre-Convention Bulletin omits several specific activities of the legal department, for the reason that the activities concerned ought not to be discussed beyond the confines of the Association, and the Pre-Convention Bulletin is a published record available to the public at large. The matters withheld from our printed report should, however, be submitted to you, and I will therefore review those phases of our work during the past year.

First, practice in county hospitals. Last summer the District Attorney of Sonoma County requested the opinion of the Attorney General as to whether a County Board of Supervisors could legally restrict professional practice in a county hospital to physicians licensed by the Board of Medical Examiners. Some weeks later the Attorney General handed me an opinion prepared by three of his deputies and submitted to him for his approval, in which it was flatly and without qualification stated that as a matter of law each county hospital must be open to all practitioners licensed in the state, regardless of the type of license held.

The Attorney General withheld his approval of this opinion, and we submitted to him a detailed brief showing that in other states, courts have held that a public hospital, as well as a private hospital, may limit its staff to doctors of medicine, and even further, may limit its staff as prescribed by the standards of the American Medical Association or the American College of Surgeons.

In October of last year the Attorney General issued his formal opinion, holding that the supervisors of a county may limit, by ordinance or rule, the practitioners permitted to treat patients in a county hospital and may so limit county hospital practice to doctors of medicine. When borne in mind that the Attorney General's office has fifty or more deputies and that opinions are mass-produced by various state deputies and officials, it is extremely gratifying that the medical profession has a friend occupying the office of Attorney General in this state. Otherwise, without our knowledge and without recourse, the standards of practice in public hospitals would have been imperiled and perhaps forever lowered. Osteopaths and chiropractors could have used the opinion to force themselves into the public hospitals. The next drive would have been for legislation giving them like privilege in private hospitals.

Second, hospital construction and government gifts.

As you know, in 1946 Congress enacted the Hill-Burton bill, which provides for gifts of federal money to the states to finance construction of public hospitals and voluntary, non-profit, private hospitals. The federal law limits such gifts to a maximum of one-third of the cost of construction. The federal law also specifies that no money shall be available to any hospital unless it is open to all persons, regardless of race, color or creed, and unless it "provides a community service."

In 1947 Governor Warren sponsored and the

California Legislature adopted a state law matching the federal one-third with state funds, but limited to public hospitals. Private, non-profit hospitals are excluded from state aid, because the state constitution prohibits gifts of state money for private purposes, and the Governor opposed a constitutional amendment to change this restriction.

It had been assumed by the Department of Public Health and by our office and by others that county hospitals were ineligible for either federal or state gifts, because they are limited to the care of indigent and emergency cases, and hence do not furnish a community service. However, the Supervisors' Association in this state urged both the Federal Public Health Service and the State Department of Public Health to approve construction gifts to counties and to bolster its claim for funds, the Supervisors' Association informally asked the Attorney General's office for a ruling. Accordingly, the Director of Public Health, early in February, wrote to the Attorney General's office in San Francisco, asking for a decision. During February an informal letter was sent from the Attorney General's office, and an informal letter does not require the approval of the Attorney General in person. This letter was written to the Director of Public Health, and I quote a portion of it:

"While county hospitals have in the past usually furnished hospitalization only to indigent and emergency cases, we find no inhibition or restriction to a county's providing hospitalization for a community service which is a general non-discriminatory service to those in need of hospitalization, without respect to the ability of the person seeking services to pay a part or the whole of the value thereof."

This informal letter was forwarded to Washington and immediately the United States Public Health Service replied, stating that on the basis of the letter from the Attorney General's office, county hospitals in California are considered by the United States Public Health Service to be unrestricted, to furnish service to the community as a whole, and therefore eligible for federal funds.

As will be noted, the letter in question, although in the form of an opinion, did not go through the regular procedure required of a formal opinion. The California Medical Association was not advised while it was under preparation. We found out about it immediately after its issuance and filed a vigorous protest with the Attorney General. We have asked for a conference with him and one has been arranged during the coming week.

In our judgment it is vitally important, in the interests of the medical profession, that county hospitals not be permitted, by the back-door route of federal handouts, to convert from their long-established status as hospitals for the indigent to community hospitals serving all of the public and competing directly with private, non-profit hospitals. The California Medical Association has fought for years to prevent legislation in this state that would open the county hospitals to all persons regardless of ability to pay. We have always won that battle. Now there is a chance of losing the war by indirect action from Washington. It is perfectly obvious that if county hospitals are built with federal and state funds on the basis that they render a community service, they will ever thereafter be open to all persons regardless of ability to pay and any effort to restrict them to the indigent will be met by the bland statement, "We can't be blamed, because we took the money to build the hospital on the condition we render a community service."

Further, the fact that the matching state aid is only available to public hospitals means that a county hospital will be able to get two-thirds of its needed construction costs from the federal and state governments; while a voluntary, non-profit hospital in the same area can only get one-third—that is, the federal portion. Thus the erecting of buildings for state medicine would be financed two-thirds by the taxpayers' money. We assure you that we will do our utmost to secure a reversal of the informal letter and of the decision of the United States Public Health Service. But the active help of all members of the Association may well be necessary before the controversy is settled.

Third, the Hospital Tax Exemption Law. In 1944 the People adopted a constitutional amendment permitting real property tax exemptions for non-profit hospitals with the provision that the requirements for exemption be determined by the Legislature. In 1945 the Legislature enacted rules for obtaining tax exemption, including the following:

"When the services and expenses of the hospital, including salaries, are excessive, based upon like services and salaries in comparable institutions."

We believe that the Legislature, in providing for a comparison of expense and salaries in private hospitals with public institutions, intended a comparison of such things as hospital executive salaries, food costs, janitor services, and so forth, and did not intend to restrict professional services. However, the State Board of Equalization and the various county assessors, in administrating the legislative act, have taken the position that the comparison must be made for all services performed in a hospital, including radiologist, pathologist, etc. The situation is confusing. In some areas hospitals have readily obtained exemption and in other areas exemption has been limited or denied, where there is really no difference in the facts involved. In some instances, if professional services rendered in the hospital have been compensated at a greater rate than like services in public institutions, requested exemption has been denied. This situation is dangerous and could lead to further control of hospitals over medical services.

The Council has directed that our office devote our efforts toward remedying the condition if possible. We have held conferences with the representatives of the Association of California Hospitals and believe that the best remedy is to urge the Legislature next January to repeal the particular provision that is causing the trouble, or failing outright appeal, to secure an amendment limiting the comparison between private and public institutions to non-professional services.

Four, recent malpractice cases. Two recent malpractice problems are of state-wide interest and concern. The first arose in San Diego County. Some months ago an osteopathic surgeon, in an osteopathic hospital, performed a cesarean section. The patient did not do well, and a few months later went to a physician, who, after considerable examination, operated upon her, but without apparent improvement. Two or three months after this operation, she went to another physician, who secured an x-ray of her abdomen, which disclosed the presence of a surgical sponge. He operated, removed the sponge, which was rolled up like a napkin, and inserted in a metal ring. The patient died. The case came to the attention of the district attorney, who seriously considered filing a manslaughter information against the osteopathic surgeon and others. At the request of the County Society, Dr. Regan, counsel for the Los Angeles County Medical Association and I went to San Diego and conferred with the district attorney. We endeavored to convince the district attorney that a manslaughter proceeding, regardless of the merits of this particular case, would jeopardize all surgery everywhere, because if it was once established in law that a bad result from surgery could subject the surgeon to a manslaughter charge, all surgery would involve too great a percentage risk, and the public would be the ultimate sufferer. The district attorney decided to submit the matter to the grand jury. The grand jury did not return an indictment, but did recommend legislation making it mandatory in all hospitals to have x-rays taken of every patient after major surgery. From discussion with the district attorney, I know that he is serious about it and intends to press the recommendation of the grand jury at the next session of the Legislature. Seriously, the California Medical Association will have to have a policy to present to the Legislature on the subject, because whether we wish it or not, the subject will be presented by the district attorney, I am sure, from discussions with him. He thinks that he has an idea that will end all chances of a foreign body remaining after surgery.

The other case that I desire to call to your attention is this: One of the District Courts of Appeal in this state held that the failure of a physician to take x-rays of a woman who fell on a sidewalk and complained of great pain in the region of her hips constituted negligence as a matter of judicial knowledge, and hence the woman was not required to produce any expert testimony to support her action against the doctor. In this case it was later discovered that she had suffered a fractured hip. The Court said, and I quote:

"It is evident in the present case that when plaintiff fell, a possible fracture was indicated, and it is likewise apparent that it is a matter of common knowledge, of which the trial Court should have taken judicial notice, that the ordinary physician of good standing in his community, in the exercise of ordinary care, would have had x-ray pictures taken of the plaintiff's body when a fracture might have resulted from the fall."

This last case, along with the threatened manslaughter case in San Diego County, illustrate the degree to which the courts of law have departed from the original common-law rule that a physician is not a guarantor of cures; and the original common-law rule that negligence in medical practice can only be proven by the expert testimony of persons skilled in medical practice. The courts, and most enforcement officers, are inching backwards to the ancient concept of an eye for an eye. First the courts held, years ago, that in the case of x-ray and other burns, the burden of proof was upon the physician to prove that he was not negligent. Then the courts held that in the event of a foreign body remaining after surgery, the burden of proof was on the surgeon to prove that he did not leave it through negligence. Next follows the concept—luckily not prosecuted—that, as in the case in San Diego, that death following the leaving of a foreign body in the abdominal cavity could constitute criminal manslaughter. Then follows the notion that a judge and jury can, without proof or evidence of any kind, assume as a matter of common knowledge that failure to take x-rays is bad medical practice; in other words, that laymen may determine without aid from experts what constitutes good medical practice. We do not presume to know the answer; but we definitely feel that unless the trend of the courts towards imposing upon physicians the liability of a guarantor or warrantor is halted and reversed, the time may come when the practice of medicine and surgery is so dangerous to the practitioner, that self-protection, rather than the welfare of the patient, will of necessity be the first thought in every physician's mind. Greater efforts must be made by the profession in this state to drive home to the public that holding physicians to the dogma of "an eye for an eye" will, in the long run, stop all progress in medicine and reduce medical care to a pussy-footing, cautious activity, in which, as in some government bureaus, personal protection comes first and the job to be done a poor second.

I hope that I have not taken too much of your time. I have limited myself to those matters now before us which we believed were of sufficient importance that they should be presented to you at this time. Thank you. (Applause.)

SPEAKER ALESEN: The report of the Legal Counsel has been referred to Committee No. 1.

The report of the Committee on Associated Societies and Technical Groups; Dr. Peter Blong, do you have an additional report?

DR. PETER BLONG: No additional report.

SPEAKER ALESEN: The Committee on Audits. Dr. Shipman, do you have any additional report?

DR. SIDNEY J. SHIPMAN: No.

SPEAKER ALESEN: The Committee on Health and Public Instructions, Dr. George M. Uhl.

(No response.)

SPEAKER ALESEN: The Committee on History and Obituaries; Dr. Morton Gibbons. Is Dr. Gibbons in the house?

(No response.)

SPEAKER ALESEN: The Committee on Hospitals, Dispensaries and Clinics; Dr. Andrews, chairman.

DR. CARROLL B. ANDREWS: No additional report.

SPEAKER ALESEN: The Committee on Industrial Practice; Dr. Donald Cass.

DR. DONALD CASS: Since our report was made, the Committee has been studying the review of the report of the Industrial Accident Commission. I had hoped we would be able to present a committee schedule tonight, or, through the Council of the California Medical Association; but because these things are slow going through committees and individuals, our schedule is not ready.

We have also been approached by the nurses of the state to bring a resolution before this House that nursing service in industry shall follow the rules of the standing orders for nurses as laid down by the American Medical Association; but on the advice of our legal counsel, the Committee on Industrial Practice has postponed, or laid on the table, any such resolution, because we have been informed that it is not the privilege or the pleasure of this organization, the California Medical Association, to pull the chestnuts out of the fire for the nursing association. So we have not pushed that particular matter. We do not have a resolution prepared for this House regarding industrial nursing.

The Committee is very active, and is working hard on this schedule at the present time.

SPEAKER ALESEN: The Committee on Medical Defense; Dr. Nelson Howard, chairman.

(No response.)

SPEAKER ALESEN: Committee on Medical Economics; Dr. H. Gordon MacLean.

(No response.)

SPEAKER ALESEN: Committee on Medical Education and Medical Institutions; Dr. B. O. Raulston.

(No response.)

SPEAKER ALESEN: Committee on Organization and Membership; Dr. Mulfinger.

DR. CARL L. MULFINGER: No additional report.

SPEAKER ALESEN: Committee on Postgraduate Activities; Dr. Ruddock.

DR. JOHN C. RUDDOCK: I have no additional report at this time.

SPEAKER ALESEN: Committee on Publications; Dr. George W. Walker.

(No response.)

SPEAKER ALESEN: Committee on Medical Economics; Dr. H. Gordon MacLean.

DR. MACLEAN: Mr. Speaker and Members of the House of Delegates, this is the final report of the Committee on Medical Economics of the California Medical Association. I can assure you I am not going to read all of that (displaying); I am only going to read just the first few pages of it.

The preliminary report of the Committee was given in the Pre-Convention reports, published in the March number of CALIFORNIA MEDICINE. The Committee carried out the studies outlined therein on prepayment health insurance plans, individual physician-patient economic relations, and presents the following information:

There is increasing public demand for prepaid medical and hospital care. A voluntary system is presently favored over the government compulsory sickness insurance, but the social planners continue their activities. Doctors in the hospitals must vigorously develop sound non-profit, voluntary medical service for the medium and low-income groups.

Blue Cross has proven it is possible to provide adequate hospital service for these groups of employed workers and their dependents. This has been accomplished by following sound insurance principles and good administrative procedures. Pioneer plans made many mistakes and had financial difficulties. These have disappeared with experience. Participating hospitals underwrite most of these plans, but hospitals must be given a fair return. In spite of rising hospital costs, premiums have been kept within the public's ability to pay.

The Blue Cross Commission coordinates the plans and gathers and distributes statistics and voluminous procedures and administrative practices. This fund of information is invaluable.

Enrollment of individual workers has been experimented with but it has been necessary to raise premiums and restrict benefits.

There are now some 30,000,000 Blue Cross subscribers and 1,991 Blue Cross groups in the United States, Canada and Puerto Rico.

Medical care plans started later, without previous experience, and they made many mistakes. These are being eliminated and sound insurance principles, enrollment procedures and administrative methods have been developed. It has now been determined that medical care for serious illness, sometimes called catastrophic, can now be offered to medium and low-income groups, and at a price they can afford to pay. I would like to mention that there is some difference of opinion as to what "catastrophic" means. Some believe that it means the long-continued case, but as a matter of fact most descriptions given of serious illness employ the term "catastrophic." This includes surgical and obstetrical plus limited medical care, and also some anesthesia, x-ray and laboratory; all are a part. Doctors can be paid fair fees for care given these groups.

Some plans have been experimenting with medical, surgical and obstetrical care outside of the hospital, and these must of course necessarily be limited. It may prove costly, but should be cautiously carried out in order to obtain further experience. It is interesting to note that early comprehensive insurance was not eagerly bought by the public.

Plans, to be successful, must have good subscriber-doctor relations. Doctors must be paid a fair fee. Premiums must be high enough to pay fully for benefits given, and administration must be effective.

The cash indemnity and the combination indemnity are the two main types of plans in the United

States today. Both are growing rapidly, and there is a demand for both types. Each has its sincere supporters. The fair indemnity fees are accepted by physicians as the full fee for service rendered in the case of the middle and low-income brackets, and the indemnity actually covers the service.

The general opinion is that service for these groups is highly necessary, whatever method of payment is used. Levels of income ceilings under which service is rendered vary greatly. If the levels are too low, the service feature covers few and means very little. A ceiling of $2,400 for individuals and $3,000 for families is a satisfactory level, provided physicians take into consideration the ability to pay of those groups in the fringe above these levels. Large families need special consideration. The Bureau of Medical Economics, as developed in the San Francisco Bay area, is being of assistance to doctors in determining those deserving special consideration.

Enrollment of employed individuals, instead of the usual employed groups, is being experimented with, but here, as with hospital care, the premiums must be higher and benefits somewhat restricted.

Community enrollment drives stimulate plan growth markedly. Although they result in much financial strain to the plan, under threat of compulsory sickness insurance legislation, these drives are absolutely necessary. After a large, sudden growth, a plan must spend most of its effort to strengthen weak groups, increase the percentage requirements of participation to a sound level.

A fee schedule committee appointed by the Medical Association should continually work with the medical care plan: only in this case can satisfactory relations be maintained with member physicians.

Although Boards of Trustees are mainly made up of doctors, lay members can be of great value if carefully selected. They add much from the public and business viewpoints. Medical control must always be kept.

The Blue Shield Commission has now been formed to coordinate medical care plans and gather and extract valuable actuarial statistics, determine sound underwriting practice and administrative processes. There should be more cooperation between the Blue Cross and medical care plans. Recently General Paul Hawley, formerly of the Veterans' Administration, was appointed to coordinate them.

There are 7,500,000 persons covered by Medical Society and Blue Cross sponsored plans. This represents a 50 per cent growth in the last year. Over 90 voluntary plans operate in 42 states.

Members of the California Medical Association are solidly against compulsory sickness insurance. They are heartily in favor of sound-value prepayment plans paying fair fees to physicians. The large majority believe service should be rendered to the medium and low-income groups, with income ceilings around $2,400 for individuals and $3,000 to $3,500 for families, and are in favor of indemnities being paid by those above such groups.

California Physicians' Service has grown rapidly. Community enrollment campaigns were successful, but resulted in more risks being taken. These weak groups are being strengthened, and premium increases are being put into effect. California Physicians' Service's administration has steadily improved. New and larger quarters allow for increased business efficiency. California Physicians' Service is now operating in the black and is establishing a stabilization and reserve fund. Good business sense dictates that a reasonable reserve be built up before the payment of fees to doctors is raised above its present level. California Physicians' Service should develop a sound, natural growth, with as little outside interference as possible.

The Blue Cross plans in California have grown rapidly, providing hospital service in much of California. The Blue Cross plan in Oakland successfully operates an indemnity medical care plan, and complete care is available to hospitalized members. The majority of doctors are in favor of this plan operating in the San Francisco Bay area, where California Physicians' Service and Blue Cross plans do not operate together. The plan in Sacramento operates on an indemnity basis, and has been quite successful. Recently it lost its approval as a Blue Cross plan.

There is need for much closer collaboration between these plans. They are all working toward the same goal—non-profit, voluntary, prepayment medical and hospital care in California.

As to individual physician-patient economic relations and Bureaus of Medical Economics: The successful practice of medicine is based on good professional and economic relations between doctor and patient. If either is weak, the other breaks down. A great deal of attention has been given to improving professional ability by means of better medical training, but comparatively little has been done in teaching medical students and doctors the business of medicine.

Most doctors charge fair fees, but a very few overcharge consistently. These overcharges injure the medical profession. Every county medical association should establish a proper fee structure to protect the public interest and the good name of medicine. The public should be informed that these committees exist.

The Bureau of Medical Economics was originally set up by the Alameda County Medical Association with the idea of improving the individual physician-patient relationship. That has been done. Doctors in areas served by the Bureau of Medical Economics are heartily in favor of the work being carried on. What the Bureau of Medical Economics is, how it functions, and what it does is set forth in the Report of the Alameda County Medical Association on the Bureau of Medical Economics. The report analyzes the cause, prevention and cure of unpaid doctor bills. It is most enlightening. Further study should be made of why doctors have good or bad physician-patient economic relations with patients who are not prompt in paying their medical bills. It is hoped that

further research along these lines will be continued by Bureaus of Medical Economics. This analysis is cited in full as part of the report of the Committee on Medical Economics. I am quite sure that if it hasn't already been passed around to you, it will be.

The committee has reported on the two most important factors in prevention of compulsory sickness insurance: Voluntary, prepayment health plans and the individual physician-patient relationship. Both need further study and development. The committee makes the following recommendations:

1. That the California Medical Association initiate the formation of a committee to continually study the problems and difficulties of prepayment health plans and to develop close collaboration between the Blue Cross and the California Physicians' Service, the Association of California Hospitals and the California Medical Association; this committee to consist of one member from each of the above organizations, and said committee then to select such executives from these organizations as may be deemed advisable.

2. That the fee schedule committee of the California Medical Association work continually with the California Physicians' Service in the development of fair fees to doctors, making its report directly to California Physicians' Service.

3. That California Physicians' Service be urged to establish a satisfactory stabilization and reserve fund before increasing the 80 per cent dollar value of fees now being paid.

4. That California Physicians' Service be allowed to consolidate its growth in the last two years on a sound insurance basis with as little outside influence as is possible.

5. That the Bureaus of Medical Economics be commended on their fine work in furthering good individual relations; and that further research be encouraged and supported.

6. That the California Medical Association take aggressive action to develop further the teaching of medical economics by those best informed on the subject in medical schools, hospitals with internal residence training programs, and county medical associations.

7. That in order to further improve the physician-patient economic relationship, the California Medical Association endeavor to set up and act upon, a professional conduct system and a fair fee structure; and that county medical associations inform the public that such things exist.

Respectfully submitted, Howard W. Bosworth, Los Angeles; Dell T. Lundquist, Palo Alto; and H. Gordon MacLean of Oakland, chairman. Thank you very much. (Applause.)

SPEAKER ALESEN: The report of the Committee on Medical Economics will be turned over to Reference Committee No. 1.

At this time the House of Delegates will recess, to be reconvened later. I now turn the gavel over to Dr. Lowell S. Goin, president of the California Physicians' Service. Dr. Goin.

. . . Whereupon the House of Delegates was recessed, to be reconvened later. The gavel was passed to Dr. Lowell S. Goin, who called the Meeting of Administrative Members of the California Physicians' Service to order. . . .

SPEAKER ALESEN: We will now take a short recess, ladies and gentlemen, so that you may have a chance to stretch.

. . . Whereupon a short recess was taken. . . .

SPEAKER ALESEN: Will the House of Delegates please be seated and come to order. The House of Delegates will now reconvene, and we shall reconvene on Item (n), the report of the Committee on Public Policy and Legislation; Dr. Dwight H. Murray, chairman.

DR. ROY E. SHIPLEY: Members of the House of Delegates, I move we go into Executive Session.

. . . Whereupon the motion was duly seconded. . . .

SPEAKER ALESEN: How do you wish to define those who would remain in Executive Session? Ordinarily the delegates and alternates, the Executive Secretary and legal counsel, past presidents, are allowed to remain. Is that your wish, Dr. Shipley?

DR. SHIPLEY: That is my wish.

SPEAKER ALESEN: Do you wish to include members of the California Medical Association who wish to remain?

DR. SHIPLEY: Yes, that is agreeable.

SPEAKER ALESEN: It has been moved and seconded we go into Executive Session; this means, ladies and gentlemen, that any matters discussed and any decisions reached are to remain entirely within the halls of this House of Delegates and are not to be discussed outside.

. . . The motion was then duly carried and the House of Delegates then went into Executive Session. . . .

SPEAKER ALESEN: Is it the will of the House that we now arise from Executive Session?

. . . Whereupon it was moved, seconded and duly carried that the House of Delegates of the California Medical Association arise from Executive Session. . . .

SPEAKER ALESEN: We will now proceed to the report of the Committee on Scientific Work by Dr. L. Henry Garland.

DR. GARLAND: Nothing additional to report.

SPEAKER ALESEN: The report of the Cancer Committee; Dr. Lyell C. Kinney; chairman.

DR. KINNEY: Nothing further to report.

SPEAKER ALESEN: The report of the Editorial Board; Dr. Dwight L. Wilbur, chairman.

DR. WILBUR: Nothing new to report.

SPEAKER ALESEN: Now the reports of the Special Committees. Delegates to the American Medical Association; Dr. John W. Cline, chairman.

DR. CLINE: No additional report.

SPEAKER ALESEN: Physicians' Benevolence Committee; Dr. Axcel E. Anderson, chairman.

DR. ANDERSON: Nothing further to report at this time.

SPEAKER ALESEN: Advisory Planning Committee; Mr. John Hunton, chairman.

MR. HUNTON: No further report.

SPEAKER ALESEN: The Committee on Redistricting Council Districts: Dr. G. Dan Delprat, chairman.

DR. DELPRAT: Mr. Chairman, a committee of eight members was appointed to study the nine Councilor Districts. The function of this committee was to survey the nine Councilor Districts, with ideas of redistricting the county societies within those districts. It was not the function of this committee to question the numbers of districts which are arranged through the constitution. In view of those facts, this committee recommends no change at the present time.

SPEAKER ALESEN: The report will be referred to Reference Committee No. 1.

Now the report of the Committee on Revision of Constitution and By-Laws; Dr. Sam J. McClendon, chairman, and past president of the California Medical Association. (Applause.)

DR. MCCLENDON: Mr. Speaker, members of the House of Delegates. I am not going to read you this 45-page report. so don't be too alarmed. (Applause.)

This committee was created at the last annual session by resolution, which I shall now read.

. . . Whereupon resolution referred to was read. . . .

The committee met in three full-day sessions, and in addition it divided itself into five sub-committees, each of which met several times. The committee actively considered the objectives specifically stated in the resolution creating it. The entire present constitution and by-laws were revised, section by section, and a completely new constitution and by-laws has been presented and approved by the committee for submittal to the House of Delegates at this time; that is this 45 pages which I am not going to read to you.

Mr. Speaker, I submit a part of this committee's complete report on the constitution and by-laws for this association. Sufficient copies should be mimeographed for us by the reference committee to which this is referred, so that any delegate who wishes may be able to inspect the result of our labors. I think it is the duty and obligation of every delegate here to familiarize himself with this proposed revision. We have tried to make it practicable and workable, and have streamlined it to the point where it is about one-third the size of the present one. I call attention to the fact that it will have to lie on the table until the 1949 annual session, and in the meantime, of course, no changes will be made in its present form, as submitted to you by the committee. Therefore, if any delegate desires any change or alteration in the form of this proposed new constitution, he should appear before the reference committee and submit his proposed change before the Tuesday meeting of the House of Delegates at this session. In accordance with the present constitution, the entire new constitution and by-laws will be published at least twice in the magazine CALIFORNIA MEDICINE before the 1949 annual session. Mr. Speaker, this constitutes the report of this committee. I hand you herewith our report, and, as a part of our report, a complete copy of the new constitution and by-laws. (Applause.)

SPEAKER ALESEN: Thank you, Dr. McClendon. This report will be referred to Reference Committee No. 1.

At this time Dr. Donald A. Charnock, your Vice-Speaker, will take over the gavel.

VICE-SPEAKER CHARNOCK: Old and unfinished business.

There are six constitutional amendments which are printed on pages 6 and 7 of the official program. These constitutional amendments are referred to Reference Committee No. 3.

New business is now in order.

New Resolutions

DR. EDWIN L. BRUCK: Mr. Speaker, President Cline and members of the House of Delegates, I have here about five resolutions emanating from the Council which I wish to present to you at this time. If I may be permitted, Mr. Speaker, I would like to make an introductory remark or two about each one. The first resolution concerns the matter of drafting of physicians for what may be a forthcoming national emergency. As you know, there is present, but not yet acted upon, legislation in the Congress of the United States, both in the Senate and House, with regard to the reactivation of the draft, to include the drafting of physicians. This resolution has to do with that:

Resolution No. 1

"WHEREAS, Present world conditions make war involving this country more than a remote possibility, and

"WHEREAS, The methods of induction of medical officers used in the recent war resulted in inefficient utilization of their professional abilities, undue reduction in medical personnel to care for civilian needs in certain areas, and unnecessary hardship upon individual physicians, and

"WHEREAS, The medical profession is of the opinion that these conditions could be materially improved in a future emergency by adequate planning, and

"WHEREAS, The Armed Services have indicated a desire for aid and counsel of the medical profession in this program; now therefore, be it

"*Resolved:*

"1. That the House of Delegates of the California Medical Association instruct its Delegates to the House of Delegates of the American Medical Association to introduce and press for passage a resolution in that body offering the services of the American Medical Association to the Armed Forces in planning orderly methods of selection and induction of medical officers in case of need; and

"2. That if the House of Delegates of the American Medical Association should not so act, that the Council be instructed (a) to appoint a committee to conduct a survey of the physicians of California with

reference to: Location, ratio of physicians to population, sex, age, health, dependency status, professional training, military experience, holding of reserve commissions, probable availability for military service, and any additional data which may be deemed advisable, and (b) to consider and draw up plans for methods of determination of availability for military and civilian service."

I will present this resolution, Mr. Speaker.

VICE-SPEAKER CHARNOCK: It is referred to Reference Committee No. 3.

Resolution No. 2

DR. BRUCK: Resolution No. 2 has to do with the activities of the State Board of Health, activated by joint resolution of the Assembly and the Senate in the 1947 session. This resolution instructed the State Board of Health to make inquiry into, to survey the needs of and to make provisions for the care of, chronic alcoholism. The State Board of Health appointed an advisory committee consisting of numerous and sundry individuals throughout the state; it is composed of a member of the Farm Bureau, a member of the Welfare organizations, two members of the State Board of Health, a member from the California Tuberculosis and Health Association, a member of the California Heart Association, a member of the Hospital Association, a member of the Public Health Officers Association, and one member from the California Medical Association. In attacking the various problems involved, the State Board of Health expressed a desire to talk over, or at least to inquire into, what they consider one of the prime public health needs at the moment, chronic alcoholism. It was thought by this committee that it would be better if this study were made by the medical profession, rather than by the State Board of Health, and the promise was made that this resolution would be introduced into the House of Delegates, as follows:

"WHEREAS, The problem of chronic alcoholism and its care is apparently an increasing problem in the State of California, and

"WHEREAS, The attack upon and the solution of this problem involve the study of many phases of this condition, including incidence, causes, and methods of treatment, and

"WHEREAS, Such treatment may appropriately involve the custodial care by the state of those individuals suffering from the condition, and

"WHEREAS, The State Department of Public Health has shown an active interest in the solution of this problem, and

"WHEREAS, The studies necessary to obtain proper information regarding this condition are medical in their scope, and

"WHEREAS, The treatment of the condition is the practice of clinical medicine and clinical psychiatry, and

"WHEREAS, Such clinical treatment is the direct concern of the medical profession; now therefore, be it

"Resolved: That the C.M.A. set up a committee to be appointed by the President of the C.M.A. on an annual basis, to study the clinical and other aspects of this condition and that such a committee be composed of doctors of medicine, to include psychiatrists, and a member of the State Department of Public Health; and be it further

"Resolved: That an advisory committee composed of a member of the Farm Bureau, an insurance executive, representatives of the churches, and a member of the State Department of Motor Vehicles, be selected by this committee of the C.M.A.; and be it further

"Resolved: That this committee make a study of chronic alcoholism in its various phases, and that the results of this study be made available to the State Department of Public Health as acquired; and that an annual report be made to the House of Delegates of the C.M.A.; and be it further

"Resolved: That a sum, not to exceed $..... be appropriated by this House of Delegates to defray travel and other expenses of this committee."

VICE-SPEAKER CHARNOCK: This resolution is referred to Reference Committee No. 3.

Resolution No. 3

DR. BRUCK: These next three resolutions have to do with a revision of the By-Laws of the C.M.A., as they are at present. The first of these three has to do with committees, to try to streamline the work of the reference committees in the House of Delegates.

"Resolved: That Chapter III, Section 6(a) of the By-Laws of the California Medical Association be and the same is hereby amended, to read as follows:

"Section 6(a) Appointment of Committee on Credentials and four Reference Committees. Prior to or at the beginning of an annual session, the Speaker of the House shall appoint from the members thereof the following committees:

1. A Committee on Credentials.

"2. A Reference Committee on the Reports of Officers, the Council and Standing and Special Committees.

"3. A Reference Committee on Finance, to review the Reports of the Secretary-Treasurer and the Executive Secretary and to study and make recommendations to the House of Delegates on the budget submitted by the Council and the amount of dues for the ensuing year.

"4. A Reference Committee on Resolutions, Amendments to the Constitution and By-Laws and New and Miscellaneous Business.

"5. A Reference Committee on Executive Session, to consider business brought before the House of Delegates in Executive Session."

I submit this resolution.

VICE-SPEAKER CHARNOCK: Referred to Reference Committee No. 3.

Resolution No. 4

DR. BRUCK: This resolution, which has also to do with amending the By-Laws, refers to Chapter II, Section 10 of the By-Laws of the California Medical Association, and reads as follows:

"*Resolved:* That Chapter II, Section 10 of the By-Laws of the California Medical Association be and the same is hereby amended by deleting the final sentence of the Section, which reads: 'If a member who so transfers his residence be not elected to membership in the society of the county into which he has moved, he shall have the right to maintain his membership through payment of dues in the society of the county of his former residence if that component county society gives its sanction thereto.'"

This would delete that sentence entirely from the By-Laws.

And the last one has to do with membership where the major office of the practitioner and his residence are in different counties.

Resolution No. 5

"*Resolved:* That Chapter II, Section 9(c) of the By-Laws of the California Medical Association be and the same is hereby amended, to read as follows:

Section 9(c) Membership where Major Office and Residence are in Different Counties. A doctor of medicine who has his major office for professional practice in one county and resides in another county, or who has a major office of practice in one county and a minor office of practice in another county shall be eligible to apply for membership only in the county medical society in which his major office of practice is located."

I submit this resolution, Mr. Speaker.

VICE-SPEAKER CHARNOCK: These last three resolutions suggesting changes in the By-Laws are referred to Reference Committee No. 3, and according to our By-Laws, they may be acted upon within 24 hours. We are now open for the presentation of other resolutions.

Resolution No. 6

DR. WILLIAM G. DONALD (Alameda County): Mr. Speaker, gentlemen, my resolution reads as follows:

"WHEREAS, The practice of medicine in hospitals must be in accordance with the principles of medical ethics, just as the practice of medicine outside of hospitals, and

"WHEREAS, It is particularly important that interns, residents and fellows who acquire their first experience in the practice of medicine in hospitals, do so under circumstances and in an environment that teaches them to honor, respect and obey the principles of medical ethics, and

"WHEREAS, Approval by the Council on Medical Education and Hospitals of the American Medical Association of any hospital in which unethical practices have existed is not to the best interests of the medical profession or the public, and tends to impair the ability of county medical societies to maintain and enforce the principles of medical practice; now therefore be it

"*Resolved:* That the delegates of this Association, California Medical Association, to the House of Delegates of the American Medical Association are hereby requested and instructed to cause to be introduced at the next meeting of the House of Delegates of the American Medical Association, an appropriate resolution directing the Board of Trustees of the American Medical Association and the Association itself to cause the Council on Medical Education and Hospitals to add to its basic requirements for approval of a hospital for interns, residencies or fellowships the express condition that the hospital establish to the satisfaction of the Council on Medical Education and Hospitals that no unethical practices by doctors of medicine, the hospital itself, or others have been permitted to exist or to take place within the hospital; and be it further

"*Resolved:* That a copy of this resolution be forwarded by the Secretary of this Association to each of the delegates and alternates of this Association to the House of Delegates of the American Medical Association."

VICE-SPEAKER CHARNOCK: Thank you, Dr. Donald, this will be referred to Reference Committee No. 3.

Resolution No. 7

DR. FRANK G. CRANDALL (Los Angeles County): Mr. Speaker, members of the House of Delegates, I have been directed by the two allergy societies that have been formed in this state to bring this resolution before the members of the House of Delegates:

"WHEREAS, Within the membership of the California Medical Association there have been for a number of years a large number of physicians who are specializing in the practice of allergy, and whose primary interests are in the field of allergic diseases rather than in any of the other branches of medicine which now have Sections authorized within this Association, and

"WHEREAS, The allergists in this Association being primarily interested in advancing themselves in scientific knowledge pertaining to their own specialty, have organized within this state during the past year and a half the Los Angeles Society of Allergy, a Section of the Los Angeles County Medical Association, composed of more than twenty-five members, and the Northern California Society of Allergy composed of approximately the same number of members; and these organizations have regular meetings with a scientific program and business meetings, and because of these meetings a great deal of benefit has been derived for the members of these organizations, and

"WHEREAS, There are a number of physicians specializing in allergy in other sections of the state other than in these two metropolitan areas, who now have no opportunity to affiliate themselves with other physicians in this specialty, and

"WHEREAS, The allergists in this state who are members of the American Academy of Allergy and

the American College of Allergists, and who in a great many instances have been certified by the American Board of Certified Allergists, and

"WHEREAS, Due to the fact that practically all of the meetings of these large allergy organizations are held in the East where it is impractical for the allergists from the West Coast always to attend, and

"WHEREAS, There are many economic problems connected with fee schedules and other matters to be agreed upon and determined by the allergists to cover work done in their own specialty, and

"WHEREAS, It will be of great benefit to the members of this Association who are allergists to be able to have an Allergy Section created within the California Medical Association so that they may hold Allergy Section meetings in connection with the California Medical Association; now therefore be it

"*Resolved:* That the House of Delegates of the California Medical Association assembled in San Francisco, California, on April 11, 1948 and April 13, 1948, under the provisions of the Constitution of the California Medical Association, Article VIII, Section 3, do hereby authorize the establishment of an Allergy Section of the California Medical Association, and authorize this Section to hold meetings and transact other business as provided under the Constitution and By-Laws of this Association."

If I may have your permission to comment briefly, this afternoon at the Palace Hotel there were over 40 allergists and those interested in that subject; they unanimously endorsed this resolution and directed me to introduce it here tonight.

VICE-SPEAKER CHARNOCK: The resolution will be referred to Reference Committee No. 3.

Resolution No. 8

DR. A. B. DIEPENBROCK (San Francisco County): Ladies and gentlemen, I have several resolutions which I will now read:

"WHEREAS, Approved facilities for graduate training are inadequate to provide such training for the numbers of physicians desiring it, and

"WHEREAS, Hospitals which have physical plants and clinical material adequate to furnish good training but for various reasons are not approved for intern or resident training; now therefore, be it

"*Resolved:* That the Council of the California Medical Association appoint a committee of five, who shall be members of the faculties of the medical schools of this state to advise and assist hospitals in attaining a status of approval."

Resolution No. 9

The second resolution reads as follows:

"WHEREAS, It has come to the attention of the House of Delegates of the C.M.A. that the Veterans' Administration accepts patients with non-service connected disabilities without social service screening of said patients, and

"WHEREAS, It has come to the attention of the House of Delegates of the C.M.A. that the Veterans' Administration admits patients with injuries that come under the provisions of the Workmen's Compensation Act of the State of California and are therefore the liabilities of private insurance carriers rather than the taxpayers of the county; now therefore, be it

"*Resolved:* That the House of Delegates of the C.M.A. request a resolution to be submitted by the California Medical Association delegates to the A.M.A. recording our opposition to these practices and that a joint committee of representatives of the A.M.A. and the Veterans' Administration be held to consider rectification of such abuses as infringe upon the proper rights of private medical practice."

VICE-SPEAKER CHARNOCK: The previous two resolutions will be referred to Reference Committee No. 3.

Resolution No. 10

DR. DIEPENBROCK: The next resolution reads as follows:

"WHEREAS, The numerous resolutions passed by the delegates of the C.M.A. already cover the practice of medicine by corporations and unlicensed groups, and

"WHEREAS, The C.M.A. has already made a comprehensive and adequate study of the problem (Vol. 43, No. 1, July, 1935; Vol. 45, No. 1, page 86, July, 1936; Vol. XL, No. 6, page 439; Vol. 46, No. 6, page 419, July, 1937); now therefore, be it

"*Resolved:* That these resolutions and reports be reactivated and that the House of Delegates of the C.M.A. direct the appropriate committee to reconsider the entire action."

Resolution No. 11

The next resolution reads as follows:

"WHEREAS, The State Franchise Tax Commission via the agency of the Board of Equalization is attempting to regulate the level of salaries of physicians practicing medicine in the hospitals of California (such as pathologists, roentgenologists and anesthesiologists) and in certain instances surgeons and internists practicing in county hospitals in California, and

"WHEREAS, The same agency has indicated that the salaries of the above practitioners of medicine shall not exceed the level of salaries of their confreres employed in civic, county and state institutions, and

"WHEREAS, A survey of salaries in state, county and civic institutions were investigated by the Legislative Committee of the C.M.A. and found to be below the subsistence level, and

"WHEREAS, Said Agencies, in order to enforce their decisions, have forced certain institutions paying physicians above-mentioned in excess of the said basic rate to abandon or jeopardize their non-profit status and to pay taxes and other penalties because of this action; now therefore, be it

"*Resolved:* That the Legislative Committee of the C.M.A. be instructed to modify existing code governing such practices, exempting physicians from its regulations."

VICE-SPEAKER CHARNOCK: Reference Committee No. 3.

Resolution No. 12

DR. DIEPENBROCK: And the final resolution sponsored by the San Francisco County Medical Society:

"WHEREAS, In the 1947 session of the California Legislature there were 4,317 bills introduced in both houses, and

"WHEREAS, Of this number, 239 directly affected the practice of medicine and required constant investigation and surveillance, and

"WHEREAS, Anti-vivisectionists, cultists, and others were fostering legislation, and chiropractors and naturopaths again attempted to extend their scope of practice by legislation, and

"WHEREAS, Two bills, Senate Bill 788 and Assembly Bill 1500 on compulsory health insurance were the major legislative issues of the 1947 legislature, and

"WHEREAS, Both bills were tabled in committee, and

"WHEREAS, No legislation inimical to the medical profession was enacted by the 1947 legislature of California, and

"WHEREAS, This exceptional record of accomplishment is mainly the result of the efforts of the Committee on Public Policy and Legislation of the California Medical Association, aided by the Public Health League of California, and

"WHEREAS, This Committee, under Chairman Dwight L. Murray, gave unstintingly of its time and ability to foster sound medical practice and further the public health; now therefore, be it

"*Resolved*, That the House of Delegates of the California Medical Association extend its sincere thanks and congratulations to the Committee on Public Policy and Legislation for its efforts and achievements."

VICE-SPEAKER CHARNOCK: The resolution will be referred to Reference Committee No. 3.

Resolution No. 13

DR. J. SEVERY HIBBEN (Los Angeles County):

"WHEREAS, The complete minutes of proceedings of the California Medical Association, House of Delegates, are not printed in the official journal, and

"WHEREAS, Constituted authorities of component county societies from time to time have occasion to need the complete minutes of the California Medical Association House of Delegates in their discussion of actions taken by the State Association; now therefore, be it

"*Resolved:* That the Council be instructed to have copies of the official minutes made, so that several of these copies would be available to component county societies that may desire to refer to the same."

VICE-SPEAKER CHARNOCK: This resolution is referred to Reference Committee No. 3. As each member comes forward, will he please state his name and county?

Resolution No. 14

DR. FREDERIC J. GASPARD (Los Angeles County): Mr. Speaker and members, my resolution is the following:

"WHEREAS, The Workmen's Compensation Laws of California relating to industrial injuries and illnesses have been criticized because of the limitations surrounding the securing of advice and care and treatment by employees from doctors of medicine, other than doctors of medicine who have been designated by an insurance carrier, and

"WHEREAS, Especially in metropolitan areas it should be possible for an insurance carrier to give an injured workman the names of more than three physicians, when he asks for a change of doctor; now therefore, be it

"*Resolved:* That the Council appoint a proper committee to seek a solution of this problem and submit a detailed report thereon with recommendations at the next annual session."

VICE-SPEAKER CHARNOCK: The resolution will be referred to Reference Committee No. 3.

Resolution No. 15

DR. A. E. ANDERSON (Fresno County): This is an idea suggested by our Executive Secretary:

"WHEREAS, Some members of the Association elect to apply for Life Membership in the Association and pay a fee in order to obtain such membership, and

"WHEREAS, Other members of the Association, because of illness or other reasons are in actual financial want, and

"WHEREAS, Some members of the Association who wish to maintain active membership in order to maintain their professional liability insurance and their hospital staff memberships, may be among those who are in financial need; now therefore, be it

"*Resolved:* That the fees paid by those members applying for life membership shall not be mingled with general funds of the Association but shall be segregated and placed in the hands of the Physicians' Benevolence Committee and be made available by that Committee, for the payment of active membership dues for those members of the Association to whom active membership conveys a real meaning and necessity and who, for reasons satisfactory to the Physicians' Benevolence Committee, shall need financial assistance at such time as such funds may be available for disbursement in this manner."

VICE-SPEAKER CHARNOCK: Referred to Reference Committee No. 3.

Resolution No. 16

DR. JOHN BULLIS (Los Angeles County): This resolution is self-explanatory:

"*Be It Resolved:* That any physician who accepts a rebate is guilty of unethical conduct and such conduct is incompatible with membership in the California Medical Association. As the term 'rebate' is used herein, it means money, credits, or anything of value, which is received, directly or indirectly, in

any guise whatever, by the referring physician from any person, partnership, or corporation, profit, nonprofit, or cooperative, to whom a patient or any person is referred or sent for medical or laboratory services, or for medical or professional device, equipment, materials, or supplies."

VICE-SPEAKER CHARNOCK: Referred to Reference Committee No. 3.

Resolution No. 17

DR. WILBUR BAILEY (Los Angeles County): These resolutions are a part of a broad, general practice undertaken by the Los Angeles Radiological Society to stop rebating and keep it down and stopped:

"*Resolved:* That Section 4 of Chapter I of the By-Laws of this Association, California Medical Association, be and the same hereby is amended by adding to said section a new paragraph following the present second paragraph of the section and reading as follows:

" 'A member shall not refer his patients for diagnostic or other procedures to a laboratory or to another physician under such circumstances that a member receives, either directly or by way of a credit or charge account or otherwise, any reward or remuneration on account of such referral.'

so that said Section 4 of Chapter I will hereafter read as follows:

" '*Section 4.—Component County Societies Exclusive Judges of Qualification of Applicants for Membership.* Each component county society shall, subject to the minimum requirements for eligibility as provided by the Constitution, determine the qualifications for membership therein and shall be the sole judge of the qualifications of applicants for such membership.

"A member must not practice or claim to practice, support, cooperate with or in any other way endorse, any exclusive or sectarian system of medicine. He shall be honorable and ethical in his conduct and shall subscribe to the principles of medical ethics of the American Medical Association and to such as may from time to time be adopted by the California Medical Association, and shall recognize the authorized officers of his component county society and of this Association as the proper authority to interpret any doubtful points in ethics.

"A member shall not refer his patients for diagnostic or other procedures to a laboratory or to another physician under such circumstances that a member receives, either directly or by way of a credit or charge account or otherwise, any reward or remuneration on account of such referral.

"Every applicant for membership in a component county society shall fill out and sign in duplicate the application blanks provided by the society, which prescribe the necessary qualifications for membership. One copy of each such application shall be promptly forwarded to the office of this Association."

VICE-SPEAKER CHARNOCK: The preceding resolution is referred to Reference Committee No. 3.

Resolution No. 18(a)

DR. BAILEY: The next resolution is the following:

"WHEREAS, A tremendous amount of publicity has occurred in newspapers throughout the United States, and Los Angeles in particular, concerning medical kick-backs since January, 1948, and

"WHEREAS, Such publicity is of a highly unfavorable nature to the medical profession, and

"WHEREAS, If the Council of the Los Angeles County Medical Association which was well aware of the problem had taken an active stand against rebating, and had actually changed its by-laws to prevent such practices during previous years when the matter was repeatedly and forcibly brought to the attention of this Council, this publicity could have been averted, and

"WHEREAS, Anti-rebating resolutions by the Los Angeles County Medical Association Council made in 1929, 1940, 1942, 1943, 1947 and 1948 have all failed up to the present time to stop such unsavory practices, and

"WHEREAS, An article in the January, 1948, *Reader's Digest* entitled, 'Better Vision with a Kickback,' states:

" 'In 1942 the House of Delegates of the American Medical Association formally condemned eye glass rebates, calling the practice "basically dishonest," and pointing out that "all such unethical practices are disreputable and unscrupulous and, if not controlled, may soon besmirch the reputation of the entire medical profession."

" 'This resolution called upon county medical societies to subject violators to disciplinary action. In August, 1946, the resolution was again called to the attention of physicians.

" 'Organized medicine seems to have contented itself with these verbal condemnations. More than a year ago the Government published the names of 52 physicians who had accepted half a million dollars in rebates. Until this writing not a single one of them has been disciplined by the medical societies,' and

"WHEREAS, An article entitled 'Medical Kick-backs Can Be Ended,' will be presented to the twenty million subscribers of the *Reader's Digest* in May, 1948, which reads as follows:"

(and I would like to refer back to that later on)

"*Now Therefore Be It Resolved:* That since the basic purpose of the American Medical Association is the protection of the public against unscrupulous practices by physicians, and since these organizations receive the brunt of the unfavorable publicity caused by members who are involved in unethical practices, and since it has been proven over the years that small, but well-organized, minorities in a component county society can effectively evade the Code of Ethics to promote their own selfish interest, and

"Since it has further been shown that charges of rebating or other forms of unethical conduct can be effectively suppressed without a hearing, even though the charges are made by as many as 24 members as

happened before the Los Angeles County Medical Association Council in 1948, and

"Since our By-Laws as written at the present time permit the right of appeal to the California Medical Association or the American Medical Association only to the member accused of unethical conduct, but deny it to his accuser, the following amendment to Section 4 of the Disciplinary Procedure of the California Medical Association is offered:

"That the first paragraph be changed so that the first sentence, which reads as follows:

" 'A member of a component county society may appeal from the action of such component county society to the Council of this Association within the period of two months succeeding the date of such censure, suspension, or expulsion.'

will be followed by this sentence:

" 'The same right of appeal to the California Medical Association Council will be granted to those bringing charges of unethical conduct, if the Council of the county society has refused to review such charges or has ruled against the accuser.' "

That makes it work both ways. Now I have referred to this article which will be published in the *Reader's Digest* in the May issue, and the release date, Mr. Speaker, is not until April 23. It was not referred to specifically in the resolution because it would have to be read in Executive Session.

VICE-SPEAKER CHARNOCK: That is discussion, and therefore cannot be admitted at this time. It may be brought up tomorrow. The resolution is referred to Reference Committee No. 3.

Resolution No. 18(b)

DR. BAILEY:

"*Resolved:* That the attention of the Standing Committee on Membership and Organization of this Association is hereby directed to the exercise of its duties and powers under Subdivision (e) of Section 4 of Chapter II of the By-Laws, and under Section 4 of Chapter I; which require that all members of this Association be honorable and ethical in their conduct and subscribe to the principles of medical ethics of the A.M.A.; and be it further

"*Resolved:* That the Standing Committee on Membership and Organization is further directed to investigate any and all instances that it may discover of rebating practices or of practices under which members of this Association may in any manner receive a reward or benefit as a result of referring patients to others; and wherever said Committee shall find any instances of rebating or practices under other guise which amounts to rebating, that it forthwith prefer charges to the Secretary of the accused member's county society and prosecute said charges as it is in duty bound to do under said subsection of Section 4 of Chapter II of the By-Laws; and be it further

"*Resolved:* That the Council is hereby directed to give the Standing Committee on Membership and Organization all assistance, financial and otherwise, that said Committee may reasonably require in order to carry out the instructions contained in this resolution."

VICE-SPEAKER CHARNOCK: Referred to Reference Committee No. 3.

Resolution No. 19

DR. BURT DAVIS (Santa Clara County):

"WHEREAS, The House of Delegates of the California Medical Association has instructed the Council to examine all forms of medical practice and to compile a code of medical ethics, and

"WHEREAS, The general public and the Legislature of the State of California have been interested in certain problems concerning the ethical relationships between members of the healing arts, and

"WHEREAS, The California Medical Association has indicated that it will assist the Legislature of the State of California in the incorporation into the business and professional code of matters which heretofore have been only ethical considerations between members of the medical profession, and

"WHEREAS, There does now exist a double standard for the interpretation of medical ethics in that different tests for ethical conduct depend upon the contractual relationships between doctors, and

"WHEREAS, This double standard has operated to the great disadvantage of the individual practitioner upon whom the burden of medical practice and the defense of the private practice of medicine is largely imposed; now therefore, be it

"*Resolved:* That this House of Delegates of the California Medical Association charges the Council of the California Medical Association and all officers and members of the California Medical Association who may contact the public or its representatives to develop a single standard of medical ethics applicable to individuals and partnerships without discrimination; and be it further

"*Resolved:* That the codification of ethics as effected by the Council shall stipulate that all tests for professional ethics be equally applied regardless of the contractual arrangements between members of this Association; and be it further

"*Resolved:* That progress reports on this matter shall be rendered by the Council of the California Medical Association to the House of Delegates at each succeeding session."

VICE-SPEAKER CHARNOCK: Referred to Reference Committee No. 3.

Resolution No. 20

DR. WESLEY SMITH (San Diego County): The San Diego County Medical Society has asked me to introduce five short resolutions:

"WHEREAS, The San Diego County Medical Society feels that it has received less assistance from the California Medical Association Public Relations Counsel that its financial support would seem to warrant; now therefore, be it

"*Resolved:* That the San Diego Medical Society and all other smaller county societies should receive

assistance from the California Medical Association in the formulation of Public Relations Policy in direct proportion to the contribution of its members to the California Medical Association treasury."

VICE-SPEAKER CHARNOCK: Referred to Reference Committee No. 3.

Resolution No. 21

DR. SMITH: (Reading)

"WHEREAS, The San Diego County Medical Society feels that the present archaic coroner's system of conducting postmortem examinations acts to prevent practitioners and hospital staffs from participating in or observing the autopsies, and

"WHEREAS, This acts to prevent the proper practice of medicine and advancement of the science of medicine; now therefore, be it

"*Resolved:* That the Council of the California Medical Association foster legislation to correct these inadequacies to the governing bodies of the State of California."

VICE-SPEAKER CHARNOCK: Referred to Reference Committee No. 3.

Resolution No. 22

DR. SMITH: (Reading)

"WHEREAS, Over 50 per cent of the California Medical Association membership lies within the southern counties and distance precludes the proper liaison of the various activities of the California Medical Association; now therefore, be it

"*Resolved:* That a branch office of California Medical Association be established in one of the southern counties.

VICE-SPEAKER CHARNOCK: Referred to Reference Committee No. 3.

Resolution No. 23

DR. SMITH: (Reading)

"WHEREAS, The law providing for the care of crippled children originally was intended to encompass that group of individuals disabled by orthopedic infirmities, and

"WHEREAS, The authorities through bureaucratic administrative regulation without direct or indirect authorization by the electorate, have defined as 'crippled,' all individuals under 21 suffering from any ailment or disease; now therefore, be it

"*Resolved:* That the House of Delegates investigate the basic authority of the administrative agency concerned and the apportionment and expenditure of funds under the Crippled Children's Act. A report and recommendation for correction of this condition shall be made to the 1949 House of Delegates."

VICE-SPEAKER CHARNOCK: This resolution is referred to Reference Committee No. 3.

Resolution No. 24

DR. SMITH: (Reading)

"WHEREAS, The Mental Hygiene Clinics recently established throughout the state seriously encroach on the private practice of medicine; now therefore, be it

"*Resolved:* That the House of Delegates foster legislation to restrict the practice of the State Mental Hygiene Clinics to indigent patients."

VICE-SPEAKER CHARNOCK: Reference Committee No. 3.

Resolution No. 25

DR. D. C. OAKLEAF (Sonoma County): (Reading)

"WHEREAS, It is the present policy of the Veterans' Administration to admit for hospitalization veterans with non-service connected disabilities who are able to pay for medical care, and

"WHEREAS, This policy is contrary to Public Law 40, which states that only indigent veterans with non-service connected disabilities are eligible for hospitalization in a Veterans' Faculty, and

"WHEREAS, Such a policy denies hospitalization to the veteran with service connected disability, and

"WHEREAS, Such a policy puts an unnecessary tax burden on the public; now therefore, be it

"*Resolved:* That the delegates from California to the A.M.A. House of Delegates be instructed to bring this matter before said House of Delegates and request that the A.M.A. take steps to end this illegal practice."

VICE-SPEAKER CHARNOCK: Referred to Reference Committee No. 3.

Resolution No. 26

DR. ORRIN S. COOK (Sacramento County): This resolution is on behalf of some hospitals in connection with fees paid by C.P.S. for certain medical services.

"WHEREAS, In Northern California it has become necessary for C.P.S. to write 'hospitalization insurance' in order to fulfill the contract with its beneficiary membership to furnish hospitalizations, and

"WHEREAS, In certain hospitals, the management demands payment of radiological and pathological fees on a 100 per cent basis, whilst physicians in those specialties in practice outside of hospitals accept payment on a unit basis (present on an 80 per cent level), and

"WHEREAS, This demand by these hospitals results in unfair and discriminatory disparity in payment for identical types of medical service, with resulting decrease in funds payable for other medical service; now therefore, be it

"*Resolved:* That the House of Delegates herewith deplores this policy, and respectfully urges the hospitals involved to discontinue it on or before June 30, 1948; and be it further

"*Resolved:* That C.P.S. be requested to forward copies of this resolution to all hospitals known to demand a unit higher than that paid to physicians in non-hospital practice; and be it further

"*Resolved:* That this matter be reviewed at the first 1949 meeting of this House."

VICE-SPEAKER CHARNOCK: This will be referred to Reference Committee No. 3.

Resolution No. 27

DR. NEILL JOHNSON (San Joaquin County): Mr. Speaker, Members of the House of Delegates:

"WHEREAS, The American Medical Association has approved the World Health Organization, and

"WHEREAS, The World Health Organization has been approved by the United States Senate and the United States Department of State, and

"WHEREAS, The Ways and Means Committee of the United States Congress has not as yet reported approval of the World Health Organization, and

"WHEREAS, Disease knows no international boundaries and there is no other world health service in force at this time; now therefore, be it

"*Resolved:* That the House of Delegates of the California Medical Association go on record as favoring a World Health Organization; and be it further

"*Resolved:* That the members of the Ways and Means Committee of the United States Congress and the Representatives from California to the United States Congress be memorialized of this action."

VICE-SPEAKER CHARNOCK: Thank you, Dr. Johnson. This will be referred to Reference Committee No. 3.

Resolution No. 28

DR. FRANK B. REARDON (Sacramento County): This is a little better: I am going to give you something more for your money. This is sponsored by the California Society for Internal Medicine, and we approve and suggest this action to our members:

"WHEREAS, Insurance companies request information concerning the physical condition of applicants for insurance who are at present, or have been patients of private physicians, and

"WHEREAS, The information given by such physicians is of value in appraising the risk of those applicants, and

"WHEREAS. While most companies do pay the physicians from one to two dollars per report, this compensation is not sufficient for the annoyance and actual cost to the physician for such service; now therefore, be it

"*Resolved:* That the California Medical Association go on record establishing a fee of five dollars to physicians furnishing such service."

. . . Applause. . . .

VICE-SPEAKER CHARNOCK: Referred to Reference Committee No. 3.

Resolution No. 29

DR. H. B. BREITMAN (Los Angeles County): Members of the House of Delegates, I have a resolution here, a survey to be made:

"WHEREAS. Rapidly changing conditions in medical practice and trends have made it necessary for a number of state medical associations to change their former systems of organization and administration, and

"WHEREAS, It is important that before making changes in methods and scopes of activity long in vogue, new methods and procedures should be carefully evaluated, and

"WHEREAS, An objective survey and analysis of both existing and proposed new methods may aid in the elimination of errors, and also promote the saving of money (The Connecticut State Medical Society, for instance, having recently appointed a committee to study the organization and objectives of the Connecticut State Medical Society); now therefore, be it

"*Resolved:* That the California Medical Association through its Council, appoint a committee to study the organization, past and current expenditures, and objectives of the California Medical Association; said committee to consist of one representative chosen by the Council from each of the nine councilor districts, and one representative to be selected by each of the five largest component county societies, together with the President and President-Elect of the California Medical Association. Only the latter two shall be councilors or officers of the California Medical Association; and be it further

"*Resolved:* That the Committee meet at least three times during the coming year, to hear reports from its investigating subcommittees and take such other actions as it may see fit, and that the committee submit a written report on its findings and recommendations to the House of Delegates at its annual session in 1949, a confidential copy, for preliminary study, to be sent to each county medical society at least one month prior to the annual session.

"(Reference to Committee is in Dr. Creighton Barker's article 'Purpose of State Medical Societies' in January or February, 1948; original resolution on page 134 of February, 1947, *Connecticut State Medical Journal.*)"

VICE-SPEAKER CHARNOCK: Referred to Reference Committee No. 3.

Resolution No. 30

DR. L. L. CRAVEN (Los Angeles County): The matter of Life Memberships was brought up this afternoon. and it seems to be worrying quite a few people. Maybe my resolution will help straighten out this difficulty. I am sure you have all been waiting for this particular resolution. It reads:

"WHEREAS, The annual dues of the California Medical Association in the past three years have been so high that much complaint has been made by many members, and

"WHEREAS, The wisdom of many of the large expenditures made by the Council of the California Medical Association, particularly for publicity, radio broadcasts such as *California Caravan*, support of California Physicians' Service, loans to a New Mexico health insurance program, support of the United Public Health League and for other purposes, has been widely questioned, and

"WHEREAS, Present reserves of the California Medical Association are in excess of $800,000, and

"WHEREAS, Reduction of state dues would permit component county societies to increase their dues at their discretion for public relations work at the county level or to meet other local needs; now therefore, be it

"*Resolved:* That the California Medical Association dues for 1949 be set at $30." (Applause.)

VICE-SPEAKER CHARNOCK: Referred to Reference Committee No. 3.

Resolution No. 31

DR. G. W. CALDWELL (Los Angeles County): (Reading)

"WHEREAS, During the past few years, the Council of the California Medical Association, in its desire to carry on an effective public relations program among the citizens of California, has contracted with a public relations firm to furnish certain radio, newspaper and other publicity, such as the *California Caravan* broadcast, the total cost of such activities for the past three calendar years having amounted to $306,400, in addition to the expenditure of some $80,000 by the Council for public relations purposes, and

"WHEREAS, It is becoming more and more obvious that the only firm foundation on which the good will of the public toward the medical profession rests is the friendly personal relationships which exist between physicians and their patients, and in creating which physicians in general practice have so large a role, and

"WHEREAS, It is highly questionable whether any great amount of good will can be purchased through radio broadcasts or newspaper articles, and

"WHEREAS, The system of California Medical Association broadcasts, paid for at great expense from the dues of members, are little if at all superior to the tri-weekly broadcasts of the Los Angeles County Medical Association, done at practically no expense; now therefore, be it

"*Resolved:* That the House of Delegates instruct the Council as follows:

1. That the employment of a public relations firm be discontinued;

"2. That a well-trained director of public relations be employed by the California Medical Organization on a full-time basis whose duties among others it shall be to:

"(a) Organize and carry out a state-wide program designed to instruct practicing physicians as to ways and means of improving their individual relationships with patients and the public;

"(b) Arrange radio broadcasts of such public interest that time will be donated by radio stations;

"(c) Furnish newspapers and other periodicals with material concerning medical activities of interest to the public."

VICE-SPEAKER CHARNOCK: Referred to Reference Committee No. 3.

Resolution No. 32

DR. DAVE DOZIER (Sacramento County): (Reading)

"WHEREAS, Classroom debates are being held in the schools throughout this state on the relative merits of socialized state or federal medicine, and

"WHEREAS, Data against these propositions is at present not well organized or readily available in school libraries or public libraries; now therefore, be it

"*Resolved:* That the Committees on Publications and Education be instructed and empowered to properly prepare and distribute such data to the various schools and public libraries of the state."

VICE-SPEAKER CHARNOCK: This will be referred to Reference Committee No. 3. Are there any more resolutions? Tonight is the last time you may submit resolutions at this session. If there are no resolutions, may we once again read the names of the members of the reference committees.

. . . Whereupon the names of Reference Committee members were then repeated. . . .

VICE-SPEAKER CHARNOCK: Anybody who wishes to appear before those committees should mark those names down.

VICE-SPEAKER CHARNOCK: If there is no further business, we will stand adjourned until tomorrow at 6:30 in this room.

. . . Whereupon, at 11:20 p.m., the meeting of the House of Delegates of the California Medical Association stood adjourned.

SECOND MEETING OF HOUSE OF DELEGATES

Wednesday Evening, April 13, 1948

SPEAKER ALESEN: The house will come to order. Dr. Myers, chairman of the Credentials Committee, will you please come forward? The Chair recognizes Dr. O. R. Myers of Humboldt County, chairman of the Credentials Committee. Dr. Myers, will you give your report please?

DR. MYERS: Mr. Speaker, we have registered 160 duly qualified delegates to be seated in the House of Delegates.

SPEAKER ALESEN: Thank you, Dr. Myers. Mr. Secretary, shall we proceed to call the roll?

(The Secretary called the roll. Several delegates were not present, and alternates were named to take the vacant seats.)

SPEAKER ALESEN: It is now in order to have the Secretary announce the Council's selection of a place for the 1949 annual session.

SECRETARY GARLAND: Mr. Speaker, the Council has selected the City of Los Angeles.

SPEAKER ALESEN: We now proceed to the election of officers. The Chair announces the selection of the following tellers: Dr. Jesse L. Carr of San Francisco, Dr. Dave Dozier of Sacramento, Dr. William Snyder of Los Angeles. Election is by secret ballot. First office to be filled is that of President-Elect. Do we hear nominations for that office?

DR. FELIX R. ROSSI, JR.: Mr. Speaker, members of the House of Delegates. It is with considerable pleasure that I nominate for the position of President-Elect of the California Medical Association John W. Green of Solano County. Most of you know Dr. Green personally. You know of his fine record, but I would like to take just a few minutes to review some of the outstanding highlights of his life and his career, so that some of you who may not know him so well will be a little better informed. In the first place, Dr. Green is especially qualified to be a physician. He comes from a long line of doctors, the original John Green in this country having settled in Rhode Island about 1735, and since that time there has been a doctor in the family, at least one doctor in every generation. Furthermore, Dr. Green's father was a state senator from Indiana in 1915, so that Dr. Green has had considerable association with the legislative side of life as well as the medical side. Now, to proceed to him personally, he graduated from Rush Medical College in 1908, served in the United States Navy for approximately five years, during World War I and until 1922. He has been very active and interested in civic and social activities—a good many. The list is rather long, so I am not going into that at all. Those of you who know him know he is interested in sports, he is quite a dog fancier, a man about town, and he has been a member of three state medical societies, those of Indiana, South Dakota, and California, of the latter since 1922. He has been two times president of our Solano County Society, and five times its secretary. Now, "five times its secretary" speaks pretty well for the man's ability to do a little work, as many of you know who have been secretary of your societies. He has served as delegate to this house a number of times. He has, for the past several years, been the Councilor from our Ninth District. For the last three sessions of the A.M.A., he has been a delegate from the California Medical Association, and only recently, in fact as recently as last week, he represented the American Medical Association on a five-man committee in Chicago on the now pending problem of the American Red Cross Blood Banks; he is also serving on a similar committee for the California Medical Association. Now, in summary, I would like to say that we have without reservation in Dr. Green a man who is very sincere, capable, and dependable, a man who will serve our needs adequately and competently. And I will say this to you delegates, that while you may choose a man as good as John Green, I am sure you could not choose a better man.

SPEAKER ALESEN: The name of John W. Green has been placed in nomination for the office of President-Elect.

DR. MAKAROFF: Fellow delegates, I too come from a cow county, so I feel that those of you who come from the northern part of the state will agree with me that John Green, coming from a cow county, has done a remarkable job for our C.M.A., and I take great pleasure in seconding the nomination of John Green.

SPEAKER ALESEN: Are there additional nominations for the position of President-Elect?

DR. JOSEPHSON: In the course of C.M.A. events there occasionally comes a time when the cow counties as they are sometimes called—the rural districts—have their chance for the presidency. This evening I have the honor of presenting Dr. Stanley Kneeshaw. Dr. Stanley Kneeshaw is from San Jose, Santa Clara County. It seemed as I listened to the story of the biography of these men, we can almost look at them as counterparts. Dr. Kneeshaw himself came from the Rush Medical School. Dr. Kneeshaw came to Santa Clara County right after the First World War. Dr. Kneeshaw started giving his services to the men in the community and to the people in the community as a general practitioner and a doctor. To his fellow practitioners in the community, he gave his aid and his services as an ardent worker in the county, and soon was represented in this assembly as a delegate from the county. Since 1922, with the exception of one term of two years, Stanley has been in this assembly either as a delegate or as a member of Council. For the last three periods of three years each, nine years total, Stanley has been a member of the Council. He has represented the Fifth Council District, and has personally felt the problems of every one of the Counties of San Benito, Santa Clara, Monterey, and Santa Cruz. He has worked faithfully, diligently, and given his time in the representation of these counties. It is with a great deal of pleasure that I bring this man, a general practitioner, who not only feels the needs of the people in the community, but can also represent the feelings and needs of his fellow practitioners, Dr. Kneeshaw.

DR. REYNOLDS: It gives me pleasure to act as an uninstructed delegate from one of the "cow counties" to second the nomination of Dr. Kneeshaw.

DR. BENNINGHOVEN: It gives me great pleasure to second the nomination of Dr. Kneeshaw.

DR. WESSELS: We're 100 percent behind Stanley. He has been a marvelous councilor for our district—Monterey County is wholeheartedly in support of Stanley Kneeshaw.

SPEAKER ALESEN: Are there further nominations for the office of the President-Elect? If not, the nominations will be closed. Voting will be by ballot. The tellers will pass out the ballots. This is ballot number one for the office of President-Elect. Will you please vote on the numbered side of the ballot?

SECRETARY: Mr. Speaker, the house count is now 218 officially seated delegates.

SPEAKER ALESEN: If any delegates have come in since completion of the roll call, they may be seated in place of their respective alternates, if the alternates so request, and of course with the permission of the house.

(The Chair was now turned over to Vice-Speaker Charnock.)

SPEAKER CHARNOCK: Nominations for the office of Speaker of the House of Delegates.

DR. CRANE: I wish to nominate L. A. Alesen as Speaker of the House of Delegates to succeed himself.

SPEAKER CHARNOCK: Are there any other nominations? It has been moved and seconded that the nominations be closed. All those in favor of closing the nominations will say "aye." (General assent.) The contrary? (No nays.) How will you vote for Speaker? It has been moved and seconded that the Secretary cast a ballot for Dr. Alesen. All those in favor of this means of election will say "aye." (General assent.)

SECRETARY GARLAND: Mr. Speaker, the ballot is cast.

(The Chair was now turned over to Speaker Alesen.)

SPEAKER ALESEN: The next office is that of Vice-Speaker of the House of Delegates. Nominations are now in order.

DR. RUSCHE: I wish to nominate to succeed himself my sincere and honest competitor, Dr. Charnock.

SPEAKER ALESEN: Dr. Charnock has been nominated to succeed himself. Are there other nominations? Hearing no further nominations the Chair declares nominations closed. All those in favor of having the Secretary cast a ballot signify by saying "aye." (General assent.) Mr. Secretary, will you please cast a ballot?

SECRETARY GARLAND: Mr. Speaker, the ballot is cast.

SPEAKER ALESEN: Dr. Charnock is elected to succeed himself as Vice-Speaker.

(The Chair was now turned over to Dr. Charnock.)

SPEAKER CHARNOCK: The next office is for District Councilor from the Second District, Dr. Crane's term expiring. We have a written nomination Dr. Cosgrove, do you wish to speak for the written nomination?

DR. COSGROVE: I do.

SPEAKER CHARNOCK: May we announce the written nomination first?

SECRETARY GARLAND: Mr. Speaker, we have nominations for councilor to represent District No. 2 of the California Medical Association—Dr. George Caldwell and Dr. J. J. Crane.

SPEAKER CHARNOCK: Dr. Cosgrove now.

DR. COSGROVE: Mr. Speaker, members of the House of Delegates, it gives me great pleasure to present the name of the President-Elect of the General Practitioners Section, also a member of the Los Angeles County Medical Association. He is sincere, conscientious, and able. He was selected by an overwhelming majority at our office on March 30, 1948, and this afternoon this was confirmed by a unanimous decision. I give you the name of Dr. George W. Caldwell.

DR. MULFINGER: Mr. Speaker and members of the House of Delegates. In every organization it is necessary to have his majesty's opposition—loyal opposition, and it gives me great pleasure therefore to renominate for the office of District Councilor from Los Angeles Dr. J. J. Crane. I believe his record speaks for itself. He has been an outstanding man in his specialty on the West Coast. He is well and favorably known throughout the state as well as in his own locality, so it is incumbent upon me to nominate Dr. J. J. Crane on the basis of his record and on the basis of professional attainment.

DR. BREITMAN: I wish to second the nomination of Dr. George Caldwell. He has been a friend of twenty years who has been a friend to the general practitioners and specialists alike without partiality.

SPEAKER CHARNOCK: We have the two names for District No. 2—Dr. George Caldwell and Dr. J. J. Crane. It will be voted on ballot No. 2. We will pass these ballots out. You are voting now on Councilor District No. 2, and please vote on the numbered side. While you are passing in those ballots, which we hope you will do rapidly, we will ask the Secretary to announce the vote on President-Elect.

SECRETARY GARLAND: Mr. Speaker, the voting is Dr. Kneeshaw, 127; Dr. Green, 89.

SPEAKER CHARNOCK: Will Dr. Kneeshaw and Dr. Green come to the head of the table?

DR. GREEN: I should like to move that the election be made unanimous for Dr. Kneeshaw.

DR. KNEESHAW: All I have to say is that I thank you very much.

SPEAKER CHARNOCK: Are all the ballots in for the second ballot? We will pass now to the Fifth District.

SECRETARY GARLAND: Mr. Speaker, delegates of the Fifth Councilor District have submitted the name of Dr. Ray of San Mateo County.

SPEAKER CHARNOCK: Dr. Hartzell Ray of San Mateo County has been put in nomination. This nomination comes from the Fifth District, and Dr. Hartzell Ray will be put in nomination. We will have to vote on Dr. Ray. How will you vote? It has been moved the Secretary cast the ballot. All those who are in favor will say "aye." (General assent.)

SECRETARY GARLAND: Mr. Speaker, the ballot has been cast.

SPEAKER CHARNOCK: Dr. Ray is elected. Next is the Eighth District.

SECRETARY GARLAND: Mr. Speaker, we have one starter, and two scratches, Dr. Wayne Pollock of Sacramento is nominated for the Eighth District, Dr. Frank MacDonald nominated and withdrawn. Dr. John Lindstrum, I have been informed, is nominated and withdrawn. Dr. Lindstrum is in the audience, Mr. Speaker, and perhaps he will verify that or correct it.

DR. LINDSTRUM: I withdraw.

SPEAKER CHARNOCK: Dr. Wayne Pollock has been nominated for the Eighth Councilor District. That is the sole nomination, Mr. Secretary?

SECRETARY GARLAND: Correct.

SPEAKER CHARNOCK: How will you vote? It has been moved the Secretary cast a ballot. All those in favor say "aye." (General assent.)

SECRETARY GARLAND: Mr. Speaker, the ballot is cast.

SPEAKER CHARNOCK: Dr. Wayne Pollock has been elected from the Eighth Councilor District. The next is for Councilor-at-Large, Walter S. Cherry's term expiring.

DR. MARTIN: Mr. Speaker and delegates. It is indeed a pleasure for me to nominate Walter S. Cherry to succeed himself as delegate-at-large. Dr. Cherry has been a member of the San Bernardino Medical Society for the past 24 years. He is the past President of that organization. He has served in the House of Delegates for approximately 14 years, and has been a member of the Council for the past three years, and has not missed one of the regular Councilor meetings. Therefore, I place before you the name of Dr. Walter Cherry.

SPEAKER CHARNOCK: The name of Dr. Cherry has been placed in nomination as Councilor-at-Large. Do I hear any other nominations? How will you vote? It has been moved and seconded that the Secretary cast a ballot. All those in favor will say "aye." (General assent.)

SECRETARY GARLAND: Mr. Speaker, the ballot is cast.

SPEAKER CHARNOCK: Dr. Cherry has been elected. Next in order is to nominate another Councilor-at-Large, H. Gordon MacLean's term expiring.

DR. FRASER: Mr. Speaker and delegates. You have already heard so much from the cow counties tonight. Inasmuch as we have elected a President from the cow counties, I hate to impose on your indulgence, but I do, on behalf of Contra Costa County which is really at the gate to the corral, at least of the pastures of San Jose, Santa Clara, and all these counties up there, nominate for delegate-at-large Dr. Gordon MacLean from Oakland. Dr. MacLean, as you know, has been a work horse in the Councilor District for many years. He is also the delegate from our two counties to the A.M.A., and I think that the boys from the agricultural, industrial, and cow punching counties would like to ask your support in his behalf.

SPEAKER CHARNOCK: Dr. Gordon MacLean has been placed in nomination as Councilor-at-Large. Do I hear any other nominations? The Chair hearing none declares the nominations closed. How will you vote? It has been moved and seconded that the Secretary cast the ballot. All those in favor will signify by saying "aye." (General assent.) The ayes have it.

SECRETARY GARLAND: The ballot has been cast.

SPEAKER CHARNOCK: Dr. H. Gordon MacLean of Oakland has been elected. Position of Eugene F. Hoffman of Los Angeles—unexpired term. Dr. Hoffman was nominated—was elected by the Council to fill an unexpired term, and must be re-elected—or the office must be refilled at this election. Do I hear any nominations?

DR. SAMPSON: It is a pleasure for me to nominate my friend, Eugene Hoffman, to succeed himself in this office as Councilor-at-Large. As you heard, he has for one year filled an unexpired term, and was appointed by the Council. A man who has been in one year has just gotten his teeth into the situation, and I think that all of us will agree he will be a better Councilor if he continues for a full term.

SPEAKER CHARNOCK: Dr. Eugene Hoffman has been nominated.

DR. MEALS: I would like to nominate a man who has been outstanding as a general practitioner. He is this year's President of the Section on General Practice in Los Angeles. He is not only a doctor, but a business man, and a good House executive. I would like to nominate Dr. Fred Gaspard.

SPEAKER CHARNOCK: Dr. Fred Gaspard has been nominated.

DR. BALL: Gentlemen, I'd like to second the nomination of Dr. Gaspard. It has been my pleasure to work with him for the last year or so, as Chief of the Hospital Staff, and I think that any man that ever worked with Fred Gaspard would know that he is just tops. We all respect the fact that he doesn't live in Los Angeles, but in Glendale, but he still is a very active man, a very fine man, and I think all of us that come from that district feel that Fred Gaspard is the coming man in that district from all political aspects.

DR. BREITMAN: Dr. Gaspard has been the unanimous choice of the Los Angeles delegates. I take great pleasure in seconding his nomination.

DR. BAILEY: Mr. Speaker and delegates, we have had the chance to watch Dr. Hoffman. By this time we have seen how able he is, and how well he works. I think it would be a great credit to ourselves to return him to the Council for another term.

SPEAKER CHARNOCK: Do we have any more nominations? It has been moved and seconded that the nominations be closed. All those who are in favor of closing the nominations will say "aye." (General assent.) Nominations are closed. Dr. Hoffman and Dr. Gaspard on ballot No. 3. We have the report on ballot No. 2.

SECRETARY GARLAND: Mr. Speaker, in the first election this evening there were 216 votes cast. In the second election there were 216 votes cast. Dr. Crane, 121; Dr. Caldwell, 95.

SPEAKER CHARNOCK: The next elections are going to be of delegates and alternates to the American Medical Association. We will remind you that delegates and alternates to the American Medical Association must have been fellows of the American Medical Association for the past two years. The next office to be filled is delegate to the American Medical Association, Dr. H. Gordon MacLean's term expiring.

DR. TRUMAN: Mr. Speaker, members of the House of Delegates. It is my honor to nominate Dr. H. Gordon MacLean to succeed himself. He is enthusiastic, energetic, and capable. He has represented us all well. I need not point out to this House the advantages of a man's continuing in this position. He is a Councilor, he has had experience. It is therefore, again with pleasure, that I nominate H. Gordon MacLean to succeed himself.

SPEAKER CHARNOCK: Dr. H. Gordon MacLean has been placed in nomination. Are there any further

nominations for this position? It has been moved and seconded that the nominations be closed. Those in favor will signify by saying "aye." (General assent.)

SECRETARY GARLAND: Mr. Speaker, the ballot is cast.

SPEAKER CHARNOCK: Dr. MacLean is elected. Next office is that of E. Vincent Askey, Los Angeles, term expiring. Nominations are in order for this office.

DR. MULFINGER: Mr. Chairman and members of the House of Delegates. I beg your indulgence to be up here twice. I'm not running for any office or I'd have pressed my suit. It is such a happy occasion for me to nominate my old colleague Dr. E. Vincent Askey, your President-Elect—practically President now—for the office of delegate to the American Medical Association.

SPEAKER CHARNOCK: Dr. E. Vincent Askey, President-Elect, has been placed in nomination. Are there any other nominations? It has been moved and seconded that the nominations be closed. Those in favor of this will say "aye." (General assent.) Nominations are closed. How will you vote? It has been moved and seconded that the Secretary cast the ballot. All those who are in favor will say "aye." (General assent.)

SECRETARY GARLAND: Mr. Speaker, the ballot is cast.

SPEAKER CHARNOCK: The ballot is cast. Dr. E. Vincent Askey has been elected. The next office to be filled is that of John W. Cline, San Francisco, term expiring.

DR. WARD: Mr. Speaker, members of the House of Delegates. I don't know anything that gives me as much pleasure as to nominate John Cline to succeed himself. Having had the experience of attending the American Medical Association House of Delegates as a delegate, I have had a chance to see what an effective man John Cline is. I can tell you that he is the top man in the House of Delegates to the American Medical Association, and it gives me great pleasure to nominate him to succeed himself.

DR. DIEPENBROCK: Mr. Speaker, members of the House of Delegates. It gives me extreme pleasure to second the nomination of Dr. John Cline.

SPEAKER CHARNOCK: Are there any further nominations for this office? It has been moved and seconded that nominations be closed. All those who are in favor will signify by saying "aye." (General assent.) The nominations are closed. How will you vote? It has been moved and seconded that the Secretary cast a ballot. All those in favor will say "aye." (General assent.)

SECRETARY GARLAND: Mr. Speaker, the ballot is cast.

SPEAKER CHARNOCK: Dr. Cline has been elected. The next office is that of Donald Cass, Los Angeles, term expiring.

DR. FOSTER: Mr. Speaker, it gives me pleasure to nominate Dr. Donald Cass to succeed himself.

SPEAKER CHARNOCK: Are there any further nominations? It has been moved and seconded the nominations be closed. All those in favor signify by saying "aye." (General assent.) The nominations are closed. How will you vote? It has been moved and seconded that the Secretary cast a ballot. All those in favor will signify by saying "aye." (General assent.)

SECRETARY GARLAND: Mr. Speaker, the ballot is cast.

SPEAKER CHARNOCK: Dr. Cass has been elected. The next office is that of Ralph B. Eusden, Long Beach, term expiring.

DR. FOSTER: Mr. Speaker, members of the House of Delegates. I am proud to nominate a man from Los Angeles County Hospital, the Secretary of the Council, Secretary of the Los Angeles County Medical Association. He is President of the State Board of Medical Examiners, and a man who has given unstintingly of his time and energy for the medical profession. I wish to nominate Dr. Richard O. Bullis.

DR. CRANE: It gives me great pleasure to nominate Ralph B. Eusden to succeed himself as delegate to the A.M.A. Ralph has served one term. He was an alternate from our district, the Los Angeles County District for several terms, and is untiring. He has been on the Council of the Los Angeles County Medical Association, and is one of the members of its Board of Trustees.

SPEAKER CHARNOCK: Dr. Ralph Eusden has been placed in nomination.

DR. WARD: Mr. Speaker, members of the House, it gives me great pleasure to second the nomination of Ralph Eusden. If you could see the team that your Medical Association has working for you at the A.M.A. House of Delegates, you could realize that it takes a little while to get on to the ropes, and know what it's all about. It takes a little while to make friends and influence people. Ralph Eusden attended the last House of Delegates meeting, and made friends, and is now in a position to give us real good service. It gives me pleasure to second his nomination.

SPEAKER CHARNOCK: Are there any other nominations? The Chair, hearing none, declares the nominations closed. You will vote on ballot No. 4. While the ballots are being passed out, we will ask the Secretary to report on ballot No. 3.

SECRETARY GARLAND: Mr. Speaker, there were 213 ballots cast. Dr. Gaspard, 81; Dr. Hoffman, 132.

SPEAKER CHARNOCK: This is Ballot 4 you are voting on. Dr. Richard Bullis and Dr. Ralph Eusden. Be sure to vote on the numbered side. According to Robert's Rules of Order, you fold your ballot once. The next are the alternates to the American Medical Association. Leopold H. Fraser, alternate to Gordon MacLean, term expiring. Nominations are now in order.

DR. REYNOLDS: Mr. Speaker, members of the House of Delegates. It seems that as the price of beef and butter goes up, cows are mentioned much more frequently. This of course is the second team in the

matter of representation at the A.M.A. It is with great pleasure that I place in nomination the name of L. H. Fraser who has been the incumbent as alternate to Gordon MacLean all of his terms. Paul Fraser, as he is called by his friends, as past president of Contra Costa Medical Society—by the way, Contra Costa County is the only place the cows have to go if they don't walk into the Bay when they leave Alameda County—has sat on the bench all dressed up in a suit for all these years. He has never had a chance to run with the ball because Gordon MacLean has been too healthy. I again take great pleasure in placing his name in nomination.

SPEAKER CHARNOCK: Dr. L. H. Fraser has been placed in nomination. Are there any other nominations? If not, it has been moved and seconded that the nominations be closed. All those in favor signify by saying "aye." (General assent.) How will you vote? It has been moved and seconded that the Secretary cast a ballot. All those in favor will signify by saying "aye." (General assent.)

SECRETARY GARLAND: Mr. Speaker, the ballot is cast.

SPEAKER CHARNOCK: Dr. L. H. Fraser has been elected. The next is alternate to E. Vincent Askey, term of William Benbow Thompson, Los Angeles, expiring.

DR. CRANDALL: Mr. Speaker, members of the House of Delegates, I am very pleased to present the name of a man that most of you know, and certainly those of us in Los Angeles County know very well. That is the name of Dr. William H. Leake, who is, at the present time, the President of the Los Angeles County Medical Association. After having served a long term in the Navy as captain in the Navy Medical Corps, he will make us a very fine man in setting up to go to the A.M.A.

SPEAKER CHARNOCK: Dr. Leake has been placed in nomination. Are there any other nominations? It has been moved and seconded that the nominations be closed. All those in favor will signify by saying "aye." (General assent.) The nominations are closed. How will you vote? It has been moved and seconded that the Secretary cast a ballot. All those in favor signify by saying "aye." (General assent.)

SECRETARY GARLAND: Mr. Speaker, the ballot for Dr. Leake is cast.

SPEAKER CHARNOCK: Dr. Leake has been elected as alternate to E. Vincent Askey. The next is C. Kelly Canelo, San Jose, alternate to John W. Cline, term expiring.

DR. MAGOON: It is my privilege on behalf of the delegates from Santa Clara County to nominate to succeed himself Dr. C. Kelly Canelo of San Jose.

SPEAKER CHARNOCK: Dr. Canelo has been placed in nomination. Are there any further nominations? It has been moved and seconded the nominations be closed. All those in favor will signify by saying "aye." (General assent.) How will you vote? It has been moved the Secretary cast a ballot. All those in favor will signify by saying "aye." (General assent.)

SECRETARY GARLAND: Mr. Speaker, the ballot for Dr. Canelo is cast.

SPEAKER CHARNOCK: Dr. Canelo is elected. The next is alternate to Donald Cass. Carl L. Mulfinger incumbent through Council appointment. This will have to be voted on at this meeting. Nominations for alternate to Donald Cass are in order.

DR. BAILEY: I should like to nominate for this position Dr. Carl L. Mulfinger.

SPEAKER CHARNOCK: Dr. Mulfinger has been placed in nomination.

DR. MULFINGER: Mr. Speaker, I would like to withdraw my name.

SPEAKER CHARNOCK: Dr. Mulfinger wishes to withdraw his name. Nominations for alternate to Dr. Donald Cass are in order.

DR. RUSCHE: Mr. Speaker, House of Delegates, I wish to nominate Dr. Duke Mahannah, Long Beach.

SPEAKER CHARNOCK: Are there any other nominations? It has been moved and seconded that the nominations be closed. All those in favor will signify by saying "aye." (General assent.) The nominations are closed. How will you vote? It has been moved and seconded the Secretary cast a ballot. All those in favor will signify by saying "aye." (General assent.)

SECRETARY GARLAND: Mr. Speaker, the ballot is cast.

SPEAKER CHARNOCK: Dr. Mahannah has been elected. Dr. Elizabeth Mason-Hohl was elected last year on a new office, No. 9. She was the alternate to Dr. Ralph B. Eusden. First let us have the Secretary read the announcement of the ballot No. 4.

SECRETARY GARLAND: There were 216 votes cast. Dr. Eusden, 140; Dr. Bullis, 76.

DR. BARROW: Members of the House of Delegates. It gives me both great honor and great pleasure to nominate Dr. Elizabeth Mason-Hohl to succeed herself.

DR. FRANKLIN: Mr. Speaker, House of Delegates. I wish to join in the nomination by seconding the name of Elizabeth Mason-Hohl.

SPEAKER CHARNOCK: The name of Elizabeth Mason-Hohl has been placed in nomination. Are there any further nominations? It has been moved and seconded that the nominations be closed. All those in favor will signify by saying "aye." (General assent.) The nominations are closed. How will you vote? It has been moved and seconded the Secretary will again cast the ballot. All those in favor will signify by saying "aye." (General assent.)

SECRETARY GARLAND: Mr. Speaker, the ballot for Dr. Elizabeth Mason-Hohl is cast.

SPEAKER CHARNOCK: Dr. Elizabeth Mason-Hohl has been elected. The next is alternate to John W. Green, Frank A. MacDonald, incumbent through Council appointment, for term ending December 31, 1949.

DR. MAKAROFF: Delegates, a year ago I had the honor of being elected to this position by the dele-

gates in Los Angeles. Three months later, the Council had the distinct pleasure of informing me that I could not serve because I did not have the pink slip. I take great pleasure in nominating for the position of alternate a fellow practitioner from Humboldt County, Dr. Orris Myers.

DR. DUFFICY: I take great pleasure in seconding the nomination of Dr. O. R. Myers as alternate to John Green to the A.M.A.

DR. THOMPSON: Mr. Speaker, delegates, it gives me pleasure to nominate Frank A. MacDonald of Sacramento to succeed himself.

SPEAKER CHARNOCK: Dr. Frank A. MacDonald has been placed in nomination. Are there any further nominations? The Chair, hearing none, declares the nominations closed. This will be Ballot No. 5. You are voting on Ballot No. 5.

We will declare a recess for the C.P.S. Will the C.P.S. Trustees come forward to the platform?

(The Chair was now taken over by President of the California Physicians' Service, Dr. Lowell S. Goin.)

(House of Delegates, reconvened.)

SPEAKER ALESEN: The Secretary will announce the last vote.

SECRETARY GARLAND: The last ballot: Dr. MacDonald, 119; Dr. Myers, 81.

SPEAKER ALESEN: The next item is the announcement by the Secretary of Council's nominations of members of standing committees for approval by the House. Mr. Secretary, will you please so announce?

SECRETARY GARLAND: Mr. Speaker, the following additional members or replacements are appointed: Associated Societies and Technical Groups, Dr. Phillip Sampson, Santa Monica; Health and Public Instruction, Dr. Harold Chope, San Mateo; History and Obituaries, Dr. Robert A. Peers, Colfax; Dispensaries and Clinics, Dr. F. E. Jacobs, San Diego; Industrial Practice, Dr. Donald Cass, Los Angeles; Medical Defense, Dr. Cyril Attwood, Oakland; Medical Economics, Dr. H. Gordon MacLean, Oakland; Medical Education and Medical Institutions, Dr. L. R. Chandler, San Francisco; Organization and Membership, Dr. John Lindstrum, Marysville; Postgraduate Activities, Dr. John C. Ruddock, Los Angeles; Publications, Dr. Joseph Woolford, Eureka; Public Policy and Legislation, Dr. Anthony Diepenbrock, San Francisco; Scientific Work, Dr. Howard West, Los Angeles; Committee on Public Relations reappointed in accordance with the Constitution.

SPEAKER ALESEN: It has been moved and seconded these Council appointments be approved. Any discussion? All those in favor signify by saying "aye." (General assent.) Approved.

DR. ASKEY: Mr. Speaker, there is only one prerequisite of the President-Elect of the California Medical Association, and that is to appoint the members of the Cancer Commission. It is my pleasure to reappoint Dr. Ullman of Santa Barbara, Dr. D. Wood of San Francisco, Dr. John Cline of San Francisco, and I hereby reappoint Dr. Lyell C. Kinney as chairman of the Cancer Commission.

SPEAKER ALESEN: We will now proceed to the reports of the Reference Committees. Committee No. 1, Dr. Frees, Chairman.

DR. FREES: Mr. Speaker, members of the House. May I digress to thank Dr. Doughty of Tracy, and Dr. Martin of San Bernardino for their very fine assistance on this Committee. Picking up Section 1, your committee has reviewed the reports of the General Officers, the Councilors, the Legal Department, and the Editor of CALIFORNIA MEDICINE. The courageous and intelligent leadership of the Officers of the California Medical Association during the past year should command the respect and appreciation of every member of the California Medical Association. They have put service before self. Their reports have been printed in the Pre-Convention Bulletin, copies of which have been given to all members of the House, and have been supplemented by an oral report given by Legal Counsel at the opening meeting of the House. Your committee recommends the approval of these reports. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: Is there a second? (Seconded.) Is there any discussion? All those in favor signify by saying "aye." (General assent.) It is so ordered.

DR. FREES: Section 2: The committee has carefully reviewed the reports of the following: Executive Committee, Auditing Committee, Committee on History and Obituaries, Committee on Publications, Committee on Health and Public Instruction, Committee on Industrial Practice, Committee on Medical Education and Medical Institutions, Committee on Scientific Work, Cancer Commission, Advisory Planning Committee, Committee on Organization and Membership, Committee on Associated Societies and Technical Groups, Editorial Board of CALIFORNIA MEDICINE, Committee on Local Arrangements, and the Physicians' Benevolence Committee. Your committee recommends the approval of these reports. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: There is a second. Any discussion? All those in favor signify by saying "aye." (General assent.) It is so ordered.

DR. FREES: Section 3: The committee has also reviewed the report of the Committee on Public Policy and Legislation supplemented by an oral report to the House of Delegates in Executive Session by Dwight Murray, M.D., chairman. We recommend the acceptance of this report and we recommend that Dr. Murray be wholeheartedly commended by this House for his untiring and effective efforts on our behalf. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: Any discussion? All those in favor say "aye." (General assent.) So ordered.

DR. FREES: Section 4: Our committee recommends the adoption of the report of the Committee on Hos-

pitals, Dispensaries and Clinics as submitted by Carroll B. Andrews, M.D., chairman, and supplemented by his written and oral reports to this committee, and further recommends that the House of Delegates empower the present committee to continue its research with the other allied groups and attempt to influence the State Department of Public Health and Medical Schools to put this program in operation; and further recommends that it be commended for its work to date. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: Is there a second? (Seconded.) Any discussion? All those in favor signify by saying "aye." (General assent.) So ordered.

DR. FREES: Section 5: Your committee recommends the adoption of the report of the Committee on Medical Economics as submitted by H. Gordon MacLean, M.D., chairman, and it further recommends the adoption of the printed final report of the Committee which has been placed in the hands of every delegate; and further that the seven recommendations of this committee as outlined in the final report be adopted and carried out; and further that this committee be highly commended for its untiring efforts. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: Is there a second? (Seconded.) Any discussion? All those in favor signify by saying "aye." (General assent.) So ordered.

DR. FREES: Your committee recommends the adoption of the report of the Committee on Rural Medical Service as submitted by Carroll B. Andrews, M.D., chairman, and supplemented by his oral report to your committee. We recommend that a second annual Rural Health Conference be held within four to six months and further that the scope of the Rural Medical Service Committee be increased and broadened. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: All those in favor signify by saying "aye." (General assent.) So ordered.

DR. FREES: Section 7: Your committee recommends the adoption of the report of the Postgraduate Committee, as submitted by John C. Ruddock, M.D., chairman, and supplemented by his oral report to this Reference Committee. There is need for postgraduate training for 2,500 doctors in the rural districts of this state, since it is not convenient for them to attend courses in the metropolitan centers. These doctors are not interested in Specialty Board qualification, but desire to improve their knowledge in the field of medicine. We therefore recommend that comprehensive material should be made available to physicians gathered from outlying districts, that digests of important advances in general medicine and surgery should be presented to them, that lecturers from medical schools and hospitals should conduct seminars, discussions, and clinics at 15 rural medical centers; and that this House of Delegates should vote necessary funds not to exceed $18,000 to carry out this program. Mr. Speaker, I move the adoption of this section.

SPEAKER ALESEN: Is there a second? (Seconded.) Is there discussion? The House should note that this is a recommendation that the Council appropriate a sum of money not to exceed $18,000 in connection with this work. All those in favor signify by saying "aye." (General assent.) Carried.

DR. FREES: The committee has also reviewed the reports of two special committees which were established by action of the 1947 House of Delegates. These are the Committee on Redistricting of Councilor Districts, under the chairmanship of G. Dan Delprat, M.D., and the Committee on Constitution and By-Laws, under the chairmanship of Sam J. McClendon, M.D. Section 8: The Committee on Redistricting of Councilor Districts was appointed by the Council in accordance with the resolution adopted by this House last year and consisted of one representative from each of the nine councilor districts, none of whom was a member of the C.M.A. Council. This committee has studied thoroughly the distribution of councilor districts among the 58 counties of the state and has rendered a unanimous report to the effect that the present councilor districts should be maintained. Your committee concurs with the recommendations of this special committee. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: Is there a second? (Seconded.) Any discussion? All those in favor signify by saying "aye." (General assent.) So ordered.

DR. FREES: Section 9: The Committee on Constitution and By-Laws was appointed by the Council in accordance with the resolution adopted by this House last year and consisted of one representative from each of the nine councilor districts and one member appointed by each of the seven largest component county medical societies, none of whom was a member of the C.M.A. Council. This committee has held several meetings as a committee as a whole and numerous meetings of subcommittees appointed to study the various divisions of the entire subject of the Constitution and By-Laws. The committee has presented a complete draft of the proposed Constitution and By-Laws which are designed to add greater flexibility to the management and conduct of affairs of the Association and which contained numerous suggestions for different methods of election of officials and administration of the C.M.A. Numerous witnesses appeared before the Reference Committee to urge the adoption or rejection of certain controversial items in this proposed Constitution and By-Laws. There was unanimous opinion of all those appearing before the Reference Committee that, first, the Association should work for the adoption of a new Constitution and By-Laws and, second, that the subject is so broad and so important a new document should not be adopted without a thorough study. Therefore, your committee recommends that the Council appoint a committee of five members to study the Constitution and By-Laws prepared by this special committee and to report back to the House of Delegates at its next regular meeting. Your committee further recommends that the proposed Constitu-

tion and By-Laws be published in the official journal and that all members of the Association be urged to indicate their views on any item to the committee. Your committee wishes to commend the members of this special committee and especially commend legal counsel for an outstanding piece of work which has been arduous and performed under time limitations imposed by the early meeting of the House of Delegates this year. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: Moved and seconded this section of the report be adopted. Is there any discussion? All those in favor signify by saying "aye." (General assent.) It is so ordered.

DR. FREES: Mr. Speaker, I move the adoption of the report as a whole.

SPEAKER ALESEN: Moved and seconded. Is there any discussion? All those in favor signify by saying "aye." (General assent.) So ordered. Next is the report of Reference Committee No. 2, Chairman Dr. William G. Donald, Alameda County.

DR. DONALD: Mr. Speaker, members of the House of Delegates. Reference Committee No. 2 approached its task with respect and appreciation of the unselfish and tremendous amount of work that the Council and the Secretary and the Executive Secretary performed. Reference Committee No. 2 has faithfully reviewed the report of Council of the C.M.A., and its supplemental report. This Committee recommends its acceptance as submitted. Mr. Speaker, I so move.

SPEAKER ALESEN: Moved and seconded. Is there any discussion? All in favor signify by saying "aye." (General assent.) It is so ordered.

DR. DONALD: In accordance with the recommendations of the Council contained in its supplemental report, I now move that, if the House adopts the Constitutional amendment permitting reduction of dues in special cases (illness, postgraduate study, first five years of practice), the power to fix the amount of the reduction and the procedure for obtaining the same is hereby delegated to the Council. Mr. Speaker, I so move.

SPEAKER ALESEN: This provides a mechanism for the fixing of the dues, in case the House adopts the Constitutional amendment, which we will consider later. Is there discussion? All those in favor signify by saying "aye." (General assent.) It is so ordered.

DR. DONALD: Reference Committee No. 2 has diligently reviewed and discussed the report of the Secretary-Treasurer, and the Executive Secretary, and finds them in order and duly audited by satisfactory auditors. This committee approves the report and recommends its acceptance as published. Mr. Speaker, I so move.

SPEAKER ALESEN: Any discussion? All those in favor signify by saying "aye." (General assent.) It is so ordered.

DR. DONALD: I move the acceptance of the report as a whole.

SPEAKER ALESEN: All those in favor signify by saying "aye." (General assent.) Reference Committee No. 2's report is adopted. The next is the report of Reference Committee No. 3. Dr. Robertson Ward of San Francisco, chairman.

Constitutional Amendments

DR. WARD: Mr. Speaker, members of the House of Delegates. Distributed among you are the proposed amendments to the Constitution as published unchanged, and it will be my duty to tell you what changes and recommendations we have made in these resolutions. I want to say that Reference Committee No. 3 has considered and made recommendations on six proposed Constitutional changes and 32 resolutions. This, I believe, has been one of the largest assignments ever handed to Committee No. 3. I wish to take this opportunity to thank my committee members for their most efficient and painstaking efforts, which consumed two days, and to let you know that all decisions which I am about to give you were unanimous by your committee. If you will turn to page 6 of the Annual Report Bulletin I will briefly outline the proposed changes in the Constitution which have lain on the table for a year, and upon which you are to vote tonight. The Constitutional Amendments which we are going to act upon first are not on the mimeographed sheets that are being distributed at the present time, but they are in the Pre-Convention Bulletin. Whether you have it or not I can explain the changes so that you will know what they are, and what you are voting on. As you know, Constitutional Amendments cannot be altered in any respect so that you are voting for confirmation of the amendments as published a year ago, and again in the Pre-Convention Bulletin. The first Constitutional Amendment, relating to annual assessments, has been changed by rearrangement so that sections "b" and "c" relating to dues, war service, and reduction of dues in special cases, have been added. Your committee approves of this Constitutional Amendment as published. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: As you know, the adoption of Constitutional Amendments requires a two-thirds vote. There is no rule requiring that the vote be taken by ballot unless you so wish. How do you wish to vote upon this Constitutional Amendment—by voice? Is there any discussion upon this Committee's report? It recommends a favorable action on this Constitutional Amendment. Do you wish to discuss it? If not, are you ready to vote upon the Constitutional Amendment? All those in favor signify by saying "aye." (General assent.) It is carried.

DR. WARD: The second Constitutional Amendment has been changed in the second line of the second paragraph where the word "may" has been substituted for "shall" and now reads "Life members of the California Medical Association may be elected by the Council." In the tenth line of the same paragraph, following $150 in parentheses, has been added "or such other sum as the House of Delegates may from time to time determine." This same clause has been added after classifications 2 and 3 of life mem-

berships. Those are the entire changes in this Constitutional Amendment. Your committee recommends the adoption of this Constitutional Amendment. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: Is there a second? Is there discussion? Are you ready to vote upon this Constitutional Amendment recommended by the Committee? All those in favor of its adoption signify by saying "aye." (General assent.) It is so ordered.

DR. WARD: Constitutional Amendment No. 3 referring to the rights of active members has added a paragraph beginning in the next to the bottom line on page 7 and refers to the ineligibility of members of the medical association to hold office or to be members of the House of Delegates when they are employed by the C.M.A. or any of its component units. Your committee recommends the adoption of this Constitutional Amendment. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: Is there a second? Do you wish to discuss this Constitutional Amendment? There is no thought of hurrying you through. If you want to talk, say so. All those in favor signify by saying "aye." (General assent.) It is so ordered.

DR. WARD: The fourth amendment to the Constitution which you will find in the middle of the right hand column on Page 7, adding "(g) Additional Classes of Membership," makes it possible to include house staffs, interns and medical students in a group of special members. Your committee approves the adoption of this amendment to the Constitution with the authorization by this House to the Council of the C.M.A. to implement this section by setting the dues for this type of membership at $3.00 per year for which the special member will receive a subscription to CALIFORNIA MEDICINE. Your committee proposes that the Council shall be directed to take such action as to effect enrollment of this special class of members at the earliest possible opportunity. May I say that in your mimeographed copies, it says $2.00 a year. On the advice of the Executive Secretary I have changed that to $3.00 a year because the postal regulations state that in order to deliver CALIFORNIA MEDICINE as second or third class mail, whichever it is, at least half of the subscription price will have to be charged so that the $3.00 recommended is different from what you see on this mimeographed sheet. The committee recommends the adoption of this Constitutional Amendment with the recommendations added. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: Dr. Ward, will you clarify that? You are making a change in the original dues, aren't you?

DR. WARD: No, I'm not making any change in the Constitutional Amendment. I'm just implementing it, carrying out the provisions of the amendment by having the House at this time grant power to the Council to assess the dues and get the program in operation.

SPEAKER ALESEN: You're not in any manner proposing a change in the phrasing of the amendment? Is there a second? Any discussion? Pardon me; let's make it very clear. These amendments must be adopted by a two-thirds vote. I just want the record to show that. All in favor say "aye." (General assent.) It is so ordered.

DR. WARD: The fifth amendment on page 7 of the bulletin adds the classification of inactive membership and states the qualifications of the same. Your committee approves the adoption of this amendment. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: Moved and seconded. Is there any discussion? All those in favor signify by saying "aye." (General assent.) The amendment has been passed by more than two-thirds vote.

DR. WARD: Constitutional Amendment No. 6, at the bottom of page 7, permits of the waiving of dues during service in the armed forces or for other causes when so recommended by the constituent county society. Your committee favors the adoption of this amendment to the Constitution. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: Moved and seconded. Is there discussion?

DR. BRUCK: Dr. Ward, Mr. Speaker, members of the House. We have just passed over here a Constitutional Amendment which has to do with the reduction of dues in special cases, and then if you will read carefully Amendment No. 6, you will see that it reads as follows: "That the Constitution of the California Medical Association shall be amended: By changing Article XI, Section 1, Paragraph 2, thereof, to read as follows: "Annual dues to be reduced or waived with respect to those members serving in the armed forces of the United States during the whole or any part of any year." So far, so good; but then: "In respect to any member for any cause, upon the recommendation of the Council or Executive Board or body of the respective member's component county medical association or society." Then it goes on to the next portion, which has now been changed by Constitutional Amendment No. 1, and inasmuch as we cannot delete this—these last two clauses, "and in respect to any member for any cause, upon the recommendation of the Council or Executive Board or body," and "County Medical Society or Association" the amendment would then give the Council or Executive Board of any component County Medical Association or Society the right to fix the State Association dues. Therefore, I would ask you to think very carefully, and then, after you have done that, to vote "no."

SPEAKER ALESEN: Any further discussion?

DR. WARD: I'd like to hear from legal counsel.

MR. HASSARD: Mr. Speaker, I believe that Dr. Bruck pointed out the inconsistencies of the last part of the particular amendment with the first amendment the House adopted just a few moments ago. The very first amendment recasts the entire Section

1 of Article XI in the Constitution, and this particular amendment now before you would in turn change one paragraph of the section that you have already adopted a few moments ago. and would leave undetermined who would be ablc to fix state dues for any member for any cause.

DR. WARD: I regret to say that Reference Committee No. 3 did not notice the inconsistencies, and I hope you take Dr. Bruck's advice.

SPEAKER ALESEN: Are you ready for the question? All those in favor of this Constitutional Amendment, signify by saying "aye." (General dissent.) The amendment is lost.

Action on Resolutions

DR. WARD: For the convenience of the members of the House, and in order to conserve your time to the best of our ability the committee has had mimeographed and placed in your hands the original resolutions as introduced in the first session of the House of Delegates. In many instances the committee recommended adoption of the rcsolution unchanged, and with the permission of the House I would like to refer briefly to the changes suggested in resolutions as they are brought before you, and I will read only those in which substitute motions or broad amendments have been suggested by your committee. Resolution No. 1, introduced by the Council of the C.M.A., referring to military service, is recommended for adoption as published and unchanged. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: Any discussion? All those in favor signify by saying "aye." (General assent.) It is so ordered.

Resolution No. 2

DR. WARD: Resolution No. 2, introduced by the Council of the C.M.A., in reference to a committee to study and direct the care of chronic alcoholics has been completed by your reference committee by the addition of the amount of $2,000 being designated as the sum to be appropriated by the House of Delegates to defray travel and other expenses of this committee. The amount of this appropriation was arrived at by consultation with members of the Council and administration of C.M.A. as being sufficient to carry on this work. Your committee recommends the adoption of this resolution as completed. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: Any discussion? All those in favor signify by saying "aye." (General assent.) It is so ordered.

Resolution No. 3

DR. WARD: Resolution No. 3, introduced by the C.M.A. Council, referring to the appointment of a Committee on Credentials and Four Reference Committees has been unchanged and your committee recommends adoption of this resolution. Mr. Speaker, I move the adoption of this section of the report.

DR. ALESEN: Moved and seconded. Is there any discussion? This is a By-Law change, and it requires a two-thirds vote. Those in favor signify by saying "aye." (General assent.) It has been passed by more than two-thirds majority.

Resolution No. 4

DR. WARD: Resolution No. 4, introduced by the Council of the C.M.A.. referring to transfers of county medical society membership was approved by the Reference Committee unchanged and is recommended for adoption. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: Another By-Law change. Is there any discussion? All those in favor signify by saying "aye." (General assent.) Was there one "no" vote? It is passed by more than two-thirds majority.

Resolution No. 5

DR. WARD: Resolution No. 5, introduced by the Council of the C.M.A., referring to membership where major office and residence are in different counties was unchanged by the Reference Committee, and is recommended for adoption. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: This is a By-Law amendment. Is there any discussion? All in favor signify by saying "aye." (General assent.) It is adopted by more than two-thirds majority.

Resolution No. 6

DR. WARD: Resolution No. 6, introduced by Dr. William Donald of Alameda County, which refers to the consideration of ethical practice by hospitals approved by the Council on Medical Education and Hospitals of the A.M.A. was unchanged by your Reference Commiittee which recommends adoption of this resolution. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: Is there a second? Any discussion? All in favor signify by saying "aye." (General assent.) It is so ordered.

Resolution No. 7

DR. WARD: Resolution No. 7, introduced by Frank Crandall of Los Angeles, calling for the formation of a Section on Allergy in the C.M.A. was unchanged by your reference committee and is recommended for adoption by the House. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: Mr. Hassard, does that require a By-Law change?

DR. HASSARD: No, sir. The Constitution permits the House of Delegates to add the section.

SPEAKER ALESEN: Is there discussion? All those in favor signify by saying "aye." (General assent.) It is so ordered.

Resolution No. 8

DR. WARD: Resolution No. 8, introduced by A. B. Diepenbrock of San Francisco was considered by the Reference Committee and has been amplified by the addition of the following sentence: "The Council is further directed to consult with the Committee on Hospitals, Dispensaries and Clinics of the C.M.A.

for implementation of this program. Your committee favors the adoption of this resolution as amended. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: Moved and seconded. All those in favor signify by saying "aye." (General assent.) It is so ordered.

Resolution No. 9 (and 25)

DR. WARD: The Reference Committee found two resolutions, No. 9 and No. 25, which dealt with the present policies of the Veterans Administration as to the admission of veterans to the facilities with non-service connected disabilities. Since Resolution No. 9, introduced by the San Francisco County Medical Society through A. B. Diepenbrock, and Resolution No. 25, introduced for the Sonoma County Medical Society by D. C. Oakleaf, were aimed at accomplishments of the same ends, they have been combined into the following substitute resolution:

"WHEREAS, Generals Bradley and Hawley have espoused the concept that the Federal law intended the use of veterans' facilities only for the care of the veteran with service connected disability or the indigent veterans with non-service connected disabilities, and

"WHEREAS, These two champions of veterans' rights were both keen to see that the veterans receive home town care of the quality obtainable through the private practice of medicine, and

"WHEREAS, The intent of the law is being circumvented by administrative interpretation which assumes that all veterans are indigent and therefore eligible for complete care in government hospitals by government employees, and

"WHEREAS, We are reliably informed that according to Veterans' Administration records, more than 80 per cent of the free hospitalization cases handled in 1946 had no connection with military service, and

"WHEREAS, The $7,600,000,000 cost of Veterans' Administration in 1946, constituting one-fifth of the total Federal budget and one billion dollars more than the Army itself cost, represents an enormous and growing burden to veteran and non-veteran taxpayers alike, and

"WHEREAS, Veterans' organizations have repeatedly gone on record as opposing nationalization of medical practice and compulsory health insurance, and

"WHEREAS, It is inconsistent for these same organizations to urge their members to seek free care from government employed physicians when they can afford medical services rendered by the private doctor of their choosing; now therefore, be it

"*Resolved:* That this House of Delegates register its condemnation of the extension of government medical care by bureaucratic interpretation and demands that the Veterans Administration restrict its activities to those specified in existing Federal law, and be it further resolved that this resolution be introduced in the House of Delegates of the A.M.A. by delegates of C.M.A.; and be it further

"RESOLVED: That each member of Congress be memorialized by this association to the end that they may understand that each extension of federally owned hospitals and personnel to render service that can be rendered by physicians in private practice is a step toward nationalization of medical practice."

The Reference Committee recommends the adoption of this substitute resolution. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: Is there any discussion? All those in favor signify by saying "aye." (General assent.) It is so ordered.

Resolution No. 10

DR. WARD: Resolution No. 10, introduced for the San Francisco County Medical Society by A. B. Diepenbrock, which refers to the practice of medicine by corporations and unlicensed groups, is recommended for adoption unchanged. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: Moved and seconded. Is there any discussion?

DR. CLINE: May we have that resolution read?

DR. WARD: It has been requested that the resolution be read.

"WHEREAS, The numerous resolutions passed by the delegates of the C.M.A. already cover the practice of medicine by corporations and unlicensed groups, and

"WHEREAS, The C.M.A. has already made a comprehensive and adequate study of the problem (Volume 43, Number 1, July, 1935; Volume 45, Number 1, Page 86, July, 1936; Volume 40, Number 6, Page 439; Volume 46, Number 6, Page 419, July, 1937); now therefore, be it

"*Resolved:* That these resolutions and reports be reactivated and that the House of Delegates of C.M.A. direct the appropriate committee to reconsider and act."

SPEAKER ALESEN: Any further questions? The committee recommends the adoption of this resolution. All those in favor signify by saying "aye." (General assent.) It is so ordered.

Resolution No. 11

DR. WARD: Resolution No. 11, introduced for the San Francisco County Medical Society by A. B. Diepenbrock, referring to present legislation that calls for comparison of compensation paid in public institutions with compensation paid in private hospitals for determining whether a private hospital is entitled to tax exemption. In order to accomplish the intent of this resolution, your committee rewrote and offers a substitute resolution as follows:

"WHEREAS, State administrative agencies are, through interpretation of tax exemption laws, attempting to regulate the level of compensation of physicians practicing medicine in private hospitals in California, and

"WHEREAS, These agencies compare compensation of physicians in private hospitals with compensation

received by physicians employed by public institutions, and in some instances, penalize the private hospital if physicians practicing in it earn more than physicians employed in state institutions, and

"WHEREAS, All surveys and studies of salaries paid in state institutions conclude that such salaries are inadequate and below a reasonable subsistence level; now, therefore, be it

"*Resolved:* That the Council of the California Medical Association is hereby instructed to take all steps within its power to obtain legislation eliminating any comparison of compensation paid for professional services of physicians in public institutions with like services of physicians in private hospitals in connection with determination of tax exempt or other status of any private hospital."

Your committee recommends the adoption of this substitute resolution. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: Moved and seconded. Is there discussion? All those in favor signify by saying "aye." (General assent.) It is so ordered.

Resolution No. 12

DR. WARD: Resolution No. 12, introduced by A. B. Diepenbrock for the San Francisco County Medical Society, congratulating the Legislative Committee and its chairman, Dwight H. Murray, for their splendid services during the 1947 session of the Legislature, is recommended for adoption by your committee unchanged and with a fervent "amen." Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: Any discussion? All those in favor signify by saying "aye." (General assent.) It is so ordered.

Resolution No. 13

DR. WARD: Resolution No. 13, introduced by J. Severy Hibben of Los Angeles, referring to publication of the minutes of the House of Delegates. Your Reference Committee recommends this be not adopted, because the complete minutes, with the exception of executive sessions, are published in the journal of the C.M.A. and the resolution is therefore redundant. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: Any discussion? All those in favor signify by saying "aye." (General assent.) It is so ordered.

Resolution No. 14

DR. WARD: Resolution No. 14, introduced by Frederick J. Gaspard of Los Angeles, in reference to selection of additional doctors under the Workmen's Compensation Act. Your committee recommends the adoption of this resolution unchanged. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: Is there any discussion? All those in favor signify by saying "aye." (General assent.) It is so ordered.

Resolution No. 15

DR. WARD: Resolution No. 15, introduced by A. E. Anderson of Fresno, relating to life membership in the Association, was considered by your Reference Committee which reached the conclusion that the aims of this resolution had been partially accomplished by the constitutional amendment just approved by the House and that the segregation and allotment of funds to the Benevolence Fund is complicated and impractical of administration. Since the constitutional amendment referred to provides for reduction of dues by the Council for illness and other reasons, your committee recommends that this resolution be not adopted. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: The House will notice that favorable action on the committee's recommendation disapproves the resolution. Is there a second? Any discussion? All those in favor signify by saying "aye." (General assent.) The committee's recommendation is adopted and the resolution is therefore lost.

Resolution No. 16

DR. WARD: Resolution No. 16, introduced by John Bullis of Los Angeles. I hereby call your attention to an error in your mimeographed copy which attributed this resolution to R. O. Bullis. This resolution refers to a definition of rebates. Your committee recommends the adoption of this resolution unchanged. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: Is there discussion? All in favor signify by saying "aye." (General assent.) It is so ordered.

Resolution No. 17

DR. WARD: Resolution No. 17, introduced by Wilbur Bailey of Los Angeles, calls for the addition of a paragraph to Section 4, Chapter I of the By-Laws of the C.M.A. by addition of a paragraph prohibiting referral of patients to certain institutions. Your Reference Committee recommends approval of this resolution unchanged. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: This is a By-Law change. Is there any discussion? All those in favor signify by saying "aye." (General assent.) It has been passed by more than two-thirds majority.

Resolution No. 18

DR. WARD: Resolution No. 18, introduced by Wilbur Bailey of Los Angeles, establishing the right of the accuser to carry charges to the Council of the C.M.A., was given detailed study by your Reference Committee. A great deal of discussion was carried on by those interested in this resolution. Because it was felt that the aims of this resolution could be as well accomplished by existing mechanisms such as the Standing Committee on Membership and Organization of the C.M.A., a substitute resolution introduced by Dr. Bailey at the Sunday meeting of the House of Delegates, but inadvertently not included

in your mimeographed copy, is placed before you by the committee. This resolution reads as follows:

"*Resolved:* That the Standing Committee on Membership and Organization of this Association is hereby directed to exercise its duties and powers under subdivision (c) of Section 2 of Chapter II of the By-Laws, and under Section 4 of Chapter I of the By-Laws, which require that all members of this Association be honorable and ethical in their conduct and subscribe to the principles of medical ethics of the American Medical Association; and be it further

"*Resolved:* That the Standing Committee on Membership and Organization is further directed to investigate any and all instances that it may discover of rebating practices or of practices under which members of this Association may in any manner receive a reward or benefit as the result of referring patients to others: and wherever said committee shall find any instances of rebating or practices that under other guises amount to rebating, that it forthwith prefer charges to the secretary of the accused member's county society and prosecute said charges as it is in duty bound to do under said subsection (a) of Section 2 of Chapter II of the By-Laws; and be it further

"*Resolved:* That the Council is hereby directed to give the Standing Committee on Membership and Organization all assistance, financial and otherwise, that said committee may reasonably require in order to carry out the instructions contained in this resolution."

Your Reference Committee recommends the adoption of this substitute resolution. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: Any discussion?

DR. SHEPHARD: (Question asked by Dr. Shephard not audible to reporter.)

MR. HASSARD: Dr. Shephard, based on what sense?

DR. SHEPHARD: The question of getting the county society into difficulty for bringing action as preferred in this resolution. Most county societies have a specified form in which charges must be preferred, and we had an experience in this state not long ago where the thing went up to the Council of the A.M.A., and because certain counties and states had not followed their own rules and regulations regarding how charges should be preferred, when it got to the A.M.A. it was turned back.

MR. HASSARD: Dr. Shephard, this resolution does not change in any way the present By-Laws of the California Medical Association. All it does, as I understand it, is direct the Standing Committee on Membership and Organization to act under one of the existing sections of the By-Laws.

SPEAKER ALESEN: Was there a second? Is there further discussion? All those in favor signify by saying "aye." (General assent.) It is carried.

Resolution No. 19

DR. WARD: Resolution No. 19, introduced by Burt Davis of Santa Clara County, which refers to interpretation of medical ethics as applied to individuals and associations, was given minute consideration by your Reference Committee. By agreement with Dr. Davis, your committee drew up a substitute resolution which more clearly defines the issues than the original resolution. This substitute resolution reads as follows:

"WHEREAS, The Principles of Medical Ethics of the American Medical Association expressly provide that all of the ethical rules governing individual Doctors of Medicine apply with equal force and scope to physicians practicing in groups (no matter how organized or composed), and

"WHEREAS, The interpretation and enforcement of this principle presents many and varied problems, complex in nature, which ought to be clarified and restated in simple direct form so that the members of the Association may have a ready, intelligible guide to the ethical bounds and limits of group practice, applying thereto the same rules that govern individual practice; now, therefore, be it

"*Resolved:* That the Council is directed to prepare and submit to the next session of the House of Delegates for approval and adoption, a definite and comprehensive Code of Ethical Principles applicable to all types of group practice, such code to be based on the fundamental concept that there must be a single standard of ethics governing all physicians regardless of the organization form chosen for the conduct of their practices. Your committee recommends the adoption of this substitute resolution."

Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: Is there discussion? All those in favor signify by saying "aye." (General assent.) It is carried.

Resolution No. 20

DR. WARD: Resolution No. 20, introduced by Wesley Smith of San Diego, referring to assistance of the public relations counsel to outlying county societies, was amended by your committee in consultation with representatives of societies in the southern part of the state. The amended resolution is as follows:

"WHEREAS, The San Diego County Medical Society feels that it has received less assistance from the C.M.A. public relations counsel than its financial support would seem to warrant; therefore be it

"*Resolved:* That the San Diego County Medical Society and all other smaller county societies should receive assistance from the C.M.A. in the formation of public relations policies more in accord to the contributions of its members to the C.M.A. treasury. The Council of the C.M.A. is hereby directed to implement this resolution by arranging consultation between the public relations counsel and the involved county medical society officers not less than once annually. The Council is further directed to make available to these county societies additional consultation by its public relations counsel when specifically requested."

Your committee recommends the adoption of this amended resolution. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: Any discussion? All those in favor signify by saying "aye." (General assent.) It is so ordered.

Resolution No. 21

DR. WARD: Resolution No. 21, introduced by Wesley Smith of San Diego, referring to the coroner's system of conducting postmortem examinations. Your committee clarified this resolution by the addition of two words so that the last paragraph of the resolution will read as follows:

"*Resolved:* That the Council of the C.M.A. be directed to foster legislation to correct these inadequacies to the governing bodies of the State of California."

Your committee recommends the adoption of this amended resolution. Mr. Speaker, I move the adoption of this section of this report.

SPEAKER ALESEN: Is there any discussion?

DR. CLINE: Heretofore, the same recommendation has been made, and it was found by your Legislative Committee inadvisable at the particular time to go ahead with the idea. I think we are all in agreement with the intent of this resolution, but I think that it is embarrassing to have the Council directed, or your Legislative Committee directed, to secure the process of legislation when circumstances of a given time might make the pressing of that legislation highly inadvisable. I would like to ask if it is the opinion of the committee that this is a mandate that such legislation be prepared and pressed regardless, and if so, I ask you to vote, or rather—

DR. WARD: Well, we didn't want to put any burrs under the tail of the Council, so we didn't make this a mandate, and we didn't set any time. As it reads, "That the Council of the C.M.A. be directed to foster legislation to correct these inadequacies to the governing bodies of the State of California," there is no limitation on when the Council should do this.

SPEAKER ALESEN: Is there any further discussion?

DR. MURRAY: Mr. Speaker, Dr. Ward, Members of the House of Delegates. Such a resolution was introduced, I think, two or three years ago. I don't remember what year now, but the resolution was to the effect that the Legislative Committee should try to get this coroner's system, which we agree is somewhat antiquated, changed. But due to the press of other legislative matters, particularly compulsory health insurance, we felt it highly inadvisable to undertake any controversial legislation, as that would be. You understand that that will meet opposition from the governing bodies of the counties, such as the Board of Trustees in some instances, the Sheriffs in other instances, the Coroners, and so forth. I should like to have the addition of a word or phrase—"At the discretion of the Council and the Legislative Committee," or, if you wish, "At the discretion of the Legislative Committee with the advice and consultation of the Council."

SPEAKER ALESEN: Do you move that in a form of an amendment, Dr. Murray?

DR. MURRAY: Yes, I do.

SPEAKER ALESEN: Will you clarify that. What is your proposal?

DR. MURRAY: I have to think about that—the wording.

DR. WARD: I'll accept Dr. Murray's suggestion for an amendment to our substitute resolution which then reads as follows:

"*Resolved:* That the Council of the C.M.A. be directed to foster, *at its discretion,* legislation to correct these inadequacies."

SPEAKER ALESEN: Is that amendment—the amended form of the resolution—clear to the House? Now, is there further discussion? Ready for the question? All those in favor signify by saying "aye." (General assent.) It is so ordered. That's the acceptance of the report as amended.

Resolution No. 22

DR. WARD: Resolution No. 22, introduced by Wesley Smith of San Diego, referring to a branch office of the C.M.A. in Southern California, was approved by the Reference Committee and recommended for adoption. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: Is there discussion? All those in favor signify by saying "aye." (General assent.) It is so ordered.

Resolution No. 23

DR. WARD: Resolution No. 23, introduced by Wesley Smith of San Diego, referring to care of crippled children, was amended so that the last paragraph will read:

"*Resolved*: That the House of Delegates through the Council of the C.M.A., investigate the basic authority of the administrative agency concerned and the apportionment and expenditure of funds under the Crippled Children's Act in order to bring under the provisions of the act only those unable to afford private medical care."

Your committee recommends the adoption of this amended resolution. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: Is there discussion? All those in favor signify by saying "aye." (General assent.) It is so ordered.

Resolution No. 24

DR. WARD: Resolution No. 24, introduced by Wesley Smith of San Diego, referring to the activities of Mental Hygiene Clinics, was amended so that it reads as follows:

"WHEREAS, The Mental Hygiene Clinics recently established throughout the State seriously encroach upon the private practice of medicine; therefore be it

"*Resolved:* That the House of Delegates direct the Council of the C.M.A. to foster legislation to restrict the practice of the State Mental Hygiene Clinic to patients unable to pay for private medical care."

Your committee recommends the adoption of the amended resolution. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: Is there discussion? All those in favor signify by saying "aye." (General assent.) It is so ordered.

Resolution No. 26

DR. WARD: Resolution No. 26, introduced by Orrin S. Cook of Sacramento, in reference to acceptance by hospitals of the unit value for laboratory services rendered under C.P.S. Because your committee felt that a resolution emanating from the C.M.A. would be more effective than one originating in the offices of C.P.S., this resolution was amended in the next to last paragraph by the substitution of "Council of the C.M.A." in place of "C.P.S." Otherwise, the resolution was unchanged. Your committee recommends the adoption of this amended resolution. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: Is there any discussion? All those in favor signify by saying "aye." (General assent.) It is so ordered.

Resolution No. 27

DR. WARD: Resolution No. 27, introduced by Neill Johnson of San Joaquin County, referring to participation in the World Health Organization. After considerable discussion on this resolution, your committee reached the conclusion that any action with regard to participation in this program should be taken by the A.M.A. rather than individual states. The committee therefore recommends this resolution be not adopted. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: The approval of committee's recommendation defeats the resolution. Is there any discussion? All those in favor signify by saying "aye." (General assent.) The report is approved; the resolution is rejected.

Resolution No. 28

DR. WARD: Resolution No. 28, introduced by Frank Reardon of Sacramento, in reference to fees for preparation of reports requested by insurance companies. Despite the fact that your committee agreed that insurance companies often impose upon physicians and that the physicians should be more adequately compensated for their reports, your committee did not feel that it was the function or within the province of the C.M.A. to set fees for such services. Your committee respectfully suggests that an answer to this problem might be secured if doctors would use the short insurance forms approved by the San Francisco and other county medical societies and agreed upon by a conference with insurance adjusters. On these forms is a notation that a charge will be made to the insurance companies for additional information. For these reasons, your committee recommends that this resolution be not adopted. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: Is there discussion?

DR. BENDER: There is a distinction between those two forms. This is in reference to the blanks that are sent by insurance companies to physicians to complete in order to give information about individuals who have been patients of doctors at any time in the past, maybe six months ago—maybe ten years. Insurance companies allot anywhere from nothing to $2.00 for that service—completing a blank which is of use to them, of very much value to them in many instances in deciding on insurability of an applicant for insurance. Those blanks are not comparable to the form that we have in the San Francisco County Medical Society in which information is filled in about people that you are taking care of who are making claims on an insurance company for a current accident or illness. An insurance company that is trying to decide on the insurability of an applicant wants to get information about an individual from the doctor. It seemed to us, after due deliberation, that this information is worth more to an insurance company than the one or two dollars, and frequently nothing, which they allot for such information, and it certainly takes much more of the doctor's and his secretary's time than is justified by the one or two dollars that is allotted. That's why the California Society of Internal Medicine may go on record—and has already prepared blanks for its members to send to insurance companies who request that information—as stating that the fee for such service among the internists is $5.00. We simply want to recommend that to the California Medical Association for two reasons. One, we would like—if the C.M.A. agrees—we would like to have others enjoy the benefits; and if it does agree, it would make our position as members of the California Society of Internal Medicine that much stronger.

DR. SHEPHARD: Mr. Speaker, I'm highly in favor of this report. In 1906 when I started practicing medicine I received $5.00 for making an insurance examination for an old line company. Today the doctor doing that type of work still receives $5.00 for the same service. Now, there are several county societies in this state that have their Executive Secretaries, and I think it might be very apropos, and very proper, and very effective if the Executive Secretaries of the county societies might get together and draft a letter, and, if necessary, a demand upon insurance companies, telling them that, for various reasons, from now on the fees for examinations for insurance policies will be elevated. I think in that one rule alone, our Executive Secretaries of the county societies can pay their entire cost to the society.

DR. BRUCK: I'm very heartily in favor of Dr. Bender's and Dr. Reardon's suggestion, but inasmuch as it is not within the province of C.M.A. to fix a fee, I would like to propose an amendment that would read as follows:

"*Resolved:* That the California Medical Association go on record as urging a reasonable fee to physicians for furnishing this service," rather than stating $5.00. That is a suggested amendment.

SPEAKER ALESEN: You offer as an amendment to Dr. Reardon's original resolution, the wording, "The California Medical Association go on record as urging a reasonable fee for examinations." The amendment has been seconded. This puts us into a little parliamentary difficulty here. There is a motion before the House on the adoption of committee's report which urges the rejection of the original resolution. The Chair will rule that there is before you at this time, instead of the committee's report, the original resolution as proposed by Dr. Reardon, and now the amendment to that resolution. We will vote on the amendment. All those in favor signify by saying "aye." (General assent.) There is now before you the amended resolution by Dr. Reardon with the provision that the California Medical Association go on record as urging a reasonable fee for such services. Is there any discussion on that resolution as amended? All those in favor signify by saying "aye." (General assent.) The original resolution as amended is adopted. Proceed, Dr. Ward.

Resolution No. 29

DR. WARD: Resolution No. 29, introduced by H. B. Breitman of Los Angeles, in reference to a survey committee appointed to consider and review the organization and administration of the C.M.A. Your Reference Committee was in unanimous agreement that such a review committee was unnecessary, expensive, and its creation contra-indicated because such a committee would be a duplication of the efforts of the present Constitution and By-Laws Committee under the chairmanship of Doctor McClendon. Your committee further wishes to express its confidence and approval of the manner in which the present Council and Officers of the C.M.A. have conducted their assigned duties. For the above reasons, your committee recommends that this resolution be not adopted. Mr. Speaker, I move the adoption of this section of this report.

SPEAKER ALESEN: Is there discussion? All those in favor signify by saying "aye." (General assent.) The committee's report is adopted; the resolution is rejected.

Resolution No. 30

DR. WARD: Resolution No. 30, introduced by L. L. Craven of Los Angeles, in reference to 1949 dues of the Association. After consultation with the introducer of this resolution, and with his agreement, your Reference Committee offers a substitute resolution as follows:

"WHEREAS, The annual dues of the C.M.A. have been high enough to cause financial hardship to some of its younger members; now, therefore, be it

"*Resolved:* That the 1949 dues be placed at the lowest level consistent with the 1949 budget."

Your committee recommends the adoption of this substitute resolution. Mr. Speaker, I recommend the adoption of this section of the report.

SPEAKER ALESEN: All those in favor signify by saying "aye." (General assent.) So ordered.

Resolution No. 31

DR. WARD: Resolution No. 31, introduced by George Caldwell of Los Angeles, relating to public relations counsel. In view of the report of public relations counsel to the meeting of this House last Sunday, your Reference Committee decided that the purposes of this resolution were not only inadvisable but impossible to accomplish. Following discussion of this resolution, it was felt that the Council of the C.M.A. should be complimented and encouraged in the continuation of its activities with regard to the present public relations program. For the above reasons your Reference Committee recommends that this resolution be not adopted. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: Is there discussion?

PRESIDENT CLINE: Mr. Speaker, members of the House of Delegates. As your President this last year, when criticism of the public relations program was offered by various members, I took it upon myself to write to certain individuals in the state in the name of the Association seeking information concerning the effectiveness of the program that had been carried out. The members chosen were four members of the State Legislature, namely, the Lieutenant Governor, the Speaker of the Assembly, Senator Fred Kraft who had been chairman, while he was in the Assembly, of the committee which heard and tabled Governor Warren's original bill, and Mr. Ernest Geddes of the Assembly because he was the chairman of the Interim Committee which studied health insurance. In that letter, I asked certain specific questions. I shan't bother to read that letter, but I think it is worthwhile for you to hear the reply. The first question was, "Do you consider that the existence of California Physicians' Service has been a valuable factor in our fight against the enactment of a compulsory health insurance law? If so, how effective do you believe it has been? (2) Do you consider that a continued growth of California Physicians' Service would be of value in combating similar efforts in the future? (3) Do you consider that the Blue Cross plans, insurance coverage and all other forms of voluntary medical care coverage are of value in this fight? If so, do you believe they will have continuing value? (4) Do you believe this Association should continue this campaign of public education—that a continuation would be of value to the public, to the Legislature, to this Association? (5) Finally, do you believe that the campaign this Association has carried on for the past two years has had any measurable effect on the status of this Association in the opinion of the Legislature and in the opinion of your own constituents?"

If I may ask the House to grant the time to read the replies, I think they will be illuminating to you. The letter from Mr. Kraft, in which he answers the questions serially:

"(1) Yes. In my opinion the California Physicians' Service has been most effective in the fight against health insurance. At one time it was the only weapon which I had available to me in my struggle with the proponents of health insurance. (2) I definitely be-

lieve that its continued growth would be of value in combating similar efforts. I would like to answer this question and No. 3 in some detail at this point. I am now selling both life insurance and accident and health insurance. I have found in my many contacts that the general public is becoming acutely aware of the value of the latter type of insurance. They appreciate the feeling of both independence and security which it gives them. They want to provide for future emergencies, but they want to choose their own doctors and their own hospitals. They want to make those arrangements which best fit their circumstances and their needs; they do not want these dictated to them. They are aware that such policies offer a greater degree of protection than heretofore, and that despite these more liberal attractions, the cost has been greatly reduced. The growth of this realization on the part of the public is and will be, I am convinced, of incalculable value to us in defeating any future efforts to enact health insurance legislation. (3) I believe that any answer to the previous question indicates that the answer is 'yes' to both of these. (4) Yes. Very definitely this should be continued. (5) Yes. In my travels and after my talks throughout Southern California, I have continually sounded out the public's views on this. I am sure that the public is gradually becoming aware of the fact that the medical profession is trying to eliminate the high costs of medical care. As we know this has been the chief weapon of the proponents of health insurance. There is still, however, much that can be done. Some readjustment must be made by individual doctors in their method of calculating charges. Medical charges should be placed on a business basis. It is time, I believe, that the old axiom 'soak the rich and please the poor' was relinquished in favor of a more equitable method of fixing costs.

"Further, I have had numerous complaints about the extreme degree of specialization in the medical profession. Occupying as I do a midpoint between the profession and the public, I appreciate fully just what forces and conditions created the modern specialist, and further I realize that the demand on the part of the public for more and more technical knowledge and training on the part of their doctors has been responsible for this condition. In many instances, however, it has gone too far. There is an increasing demand today for more general practitioners, a demand of which, I am sure, the medical profession is acutely aware. My constituents' chief complaint is about the practice of referring a patient from one specialist to another and the consequent high charges. There has been a lessening of the close personal bonds between the patient and the old general practitioner which has disappeared in the wake of extreme specialization, and which has not worked in favor of the medical profession.

"Finally, the matter of rebates goes further than the ophthalmologists. I earnestly hope the profession will handle this in its own way, thus circumventing any 'expose'.

"My sincere thanks for giving me this opportunity to express my opinions.

"Sincerely, Fred H. Kraft."

I shan't bother to read the other letters to you. They are in much the same vein as to the efficacy of the program which the California Medical Association has carried out. Letters came from Sam L. Collins, Goodwin Knight, and Ernest R. Geddes.

Then I asked Mr. Ben Read to tell me the members of the Third House who had been most helpful to the medical profession in defeating compulsory health insurance in Sacramento. I think they were members who had an intimate knowledge of the public relations, and an intimate knowledge of legislative processes and also had demonstrated by their activities in Sacramento that they were sympathetic to your case. He gave me a list of about seven or eight names. I wrote to these men. Replies came from James Mussatti of the State Chamber of Commerce, Mr. C. R. Stevens, who represents the oil people, from the National Board of Fire Underwriters as represented by Frank J. Agnew, and from Mr. Walter J. Little, attorney in Los Angeles, who represents the railroads. I would like to read you a portion of Mr. Little's letter. It is not as long as the one I just read. I want to say this before I start: The letter addressed to these representatives of business in Sacramento was not the same letter which had been addressed to the others. When I received Mr. Kraft's reply, I realized the difficulty of following the numbers. There was different phrasing in the second letter and I specified certain accusations which had been made against the program of the C.M.A. You will recognize, therefore, certain terminology in some of these replies. Now, Mr. Little's letter: "From the frankness of your letter of March 8 regarding the question of your legislative and public relations programs, I deem it you wish a frank reply. To begin with, on the positive side, I am amazed at the recitation of your progress in increasing the number of persons now enrolled in voluntary health insurance systems in California. Since I have seen very little promotional efforts, other than those of the California Physicians' Service, it is only reasonable that this marvelous record can be credited solely to the medical profession. It is reasonable also to assume that every member of a voluntary program is an opponent of compulsion since, should there be compulsory state insurance, he would be forced to pay double or drop his protection with his family doctor.

"On the negative side—and I say this with the deepest feelings of regret, since I realize that it is a situation generated by the avarice of but a small percentage of your physicians—your medical togas are already muddied. I refer to the unfortunate rebating expose which was given particularly sensational treatment by the newspapers of Los Angeles County—Los Angeles County which sends thirty-two of the total of eighty men to the Assembly of the California Legislature. This one instance has been a most serious setback to all men of the profession. It muddied the togas of all. To regain your former prestige will require the most expert public relations, since the rebate episode has placed a serious handicap on your present and future legislative activities. I repeat: it

was unfortunate. However, much as we would like, we cannot erase history.

"To end on a positive note: Except for the incident noted above, those of us who are close to the California legislative picture have admired your constructive battle against the forces which have been working for State Medicine. You have done more than point out the dangers of State-administered Medicine—you have shown how the problem can be solved in the voluntary and democratic way. For this your entire profession is to be commended. However, under present circumstances, it would be the utmost of folly to consider even the slightest relaxation of your efforts."

This other letter, which is somewhat longer, but I think is worthwhile reading to you, is from Mr. Taylor, who is the Executive-Secretary of the Agricultural Council of California. This is an organization composed of some thirty-odd other organizations. It represents more than seven thousand farmers and is the largest farm organization in the state, being larger than the Grange or the Farm Bureau.

"Yours of March 8 has just come and I hasten to reply. I am familiar with much of the work that has been done to head off the establishment by legislation of state-controlled system of compulsory health insurance. My people and I are very much opposed to such a plan, and we have watched with interest the things that the C.M.A. and the C.P.S. have done to try to prevent the enactment of such legislation. I would not be frank with you, however, if I did not say to you that the danger of such enactment is far from past. The sooner any class of people get it out of their heads that they should not "muddy their togas in the political arena," the better off they will all be. Just this morning I came across an editorial in one of the newspapers of the state which pointed out that legislation is no longer a matter to be influenced by a few, but that if a government of free men is to be maintained, it will be maintained only as the millions participate in keeping it so. It went on to say that this can be done only by participation in the problems of government by every individual doing his part to acquaint legislators and the public at large with the problems with which he himself is acquainted.

"The sooner doctors quit thinking about their togas and begin to realize that they are an integral part of the community of people comprising this commonwealth, the better off they will be. Let me say here that this is not in any way an arraignment of you, personally, for I am sure you understand the problem about which I am talking, but too many people—whether they be doctors, lawyers (though the lawyers are less given to this), businessmen, workers, or farmers—seem to think that an honest man has no business mixing in politics or getting into the political arena. Nothing will destroy our free government more quickly than the expansion of that idea among our people.

"But, to get down to business, Doctor, I can assure you that there is plenty of danger still of compulsory health insurance. As a matter of fact, in medicine as in other branches of business a few selfish men can undo the hard work of a lot of honest, public-spirited men by the abuse of their powers within the industry in which they operate; and regardless of the fact that we ought always to oppose a compulsory health insurance plan operated by the State, there are many people who still think they are abused by the doctors—and some of them are. Again I want to make it clear that this is not an arraignment of the doctors as a whole; they are not more to be condemned than any other group, but they do hurt the cause, just the same. And I know, too, that with medical care costing as much as it does, people are very quick to pick up arguments which make them feel they can get their medical care for less."

He goes on in the same vein for another page. I want to read you just this one more. I think this is information all of you ought to have on this particular resolution before you. This comes from the California Retailers Association and is written by Vincent D. Kennedy:

"It is very difficult for me in these busy days, and under the pressures on even now here at Sacramento, to take the necessary time to reply to your letter of March 8 and give to my reply the full emphasis I feel it deserves. In the second paragraph of your letter you refer to the fact that I, among others, represented some help to your profession in connection with legislation on state-controlled system of compulsory health insurance. Goodness knows this is true, only it didn't start in 1945—it dates back many years before that time. For anyone to feel that there is little danger of a compulsory health insurance plan being enacted in the Legislature of the state at this time is ridiculous. It has been very gratifying to many of us—and from my observation from the standpoint of the people at large—to note that the medical men have departed from their smug attitude and have taken their place among the citizenry of this state as not only interested, but ready to fight politically for their rights and the rights of their patients. It is with a great deal of pride that we outside of your honored profession point to the fact that you have, and are putting forth, a highly constructive program directed in the main toward the education of the people to the evils involved in state or national socialization of medicine. A let-down at this time on the part of the medical profession would be fatal. As a matter of fact, it makes me so tired to even hear of such a thing that I can only say that if you fine leaders in the program, which I realize is a thankless job, feel that, by reason of lack of interest of the profession at large, you should retire, the welfare of this state will suffer greatly.

"Mind you, up to this point I have not referred to any selfish thinking on the part of individual medical men, but if there is any individual, or group of individuals, within the profession who are so shortsighted as not to see the ultimate result of a leveling off or letdown at this time, it is just too bad for them and they should perhaps suffer the consequence of such shortsightedness.

"As I stated at the outset, I am sorry I do not have the opportunity to 'make a speech' on this particular subject with an audience comprised of the fine, far-seeing group within the profession as well as those individuals who think that by hiding behind the cloak of a degree from a medical school, everything is going to be taken care of automatically as far as their interests, livelihood and position in society are concerned."

SPEAKER ALESEN: Is there further discussion? Do you wish to vote? All those in favor signify by saying "aye." (General assent.) It is so ordered. The resolution is rejected.

Resolution No. 32

DR. WARD: Resolution No. 32, introduced by Dave Dozier of Sacramento, referring to availability of data opposing socialized medicine to school children, libraries, etc. in California. After discussion and with the approval of the introducer, your committee recommends a substitute resolution as follows:

"WHEREAS, Classroom debates are being held in the schools throughout the State on the relative merits of socialized, state or federal medicine, and

"WHEREAS, Data against these purposes are at present not well organized or readily available in schools or public libraries; now, therefore, be it

"*Resolved:* That the Council of the C.M.A. make available to these schools and libraries the excellent literature now published by the Council on Medical Service of the A.M.A. and direct its public relations counsel to make these publications available to and encourage their use by the school children and libraries."

Your committee recommends the adoption of this substitute resolution. Mr. Speaker, I move the adoption of this section of the report.

SPEAKER ALESEN: Is there any discussion? All those in favor signify by saying "aye." (General assent.) It is so ordered.

DR. WARD: Mr. Speaker, I move the adoption of the report of Reference Committee No. 3 as a whole—as amended.

SPEAKER ALESEN: Is there a second? Is there discussion? All those in favor of the adoption of the Committee's report as amended signify by saying "aye." (General assent.) It is so ordered.

DR. WARD: This report is signed by Carl Rusche, L. E. Jacobs, and Robertson Ward.

SPEAKER ALESEN: And now the adoption of the budget for 1948-1949, and the setting of the Association dues. Dr. Bruck is chairman of the Council—Dr. Bruck.

DR. BRUCK: Gentlemen, you all have a copy of the proposed budget as to both income and to projected expenditures. I advise you all to sit down before you read it, so you won't fall down. I would like to go through this more or less item by item—rapidly, I promise you—and I'm going to take the expenditures first. As we come to each item, I will give the decrease or increase, and the reason therefore so that there will be a complete and total understanding of the budget, and I promise to take not more than eight or nine minutes. Under Item 7, that refers to expenditures proposed for projected rent, $7,000. That is a fixed fee which is the same as it has been in the past. Number 8, telephone and telegraph, an increase of about $1,000 due to increased usage and to increased rates. Postage, about $1,000, about the same. Office supplies and office expenses, $3,000, about the same. Secretary-Treasurer gets no salary. The Executive Secretary is increased from $14,000 to $16,000 this year—$2,000 on the basis of the contract for prolonged periods signed by the Council with the Secretary one year ago, bearing an increase in the Executive Secretary's salary. Clerical help from $16,000 to $20,000 due to wage increases, an increase of $4,000. Social security, unemployment taxes, about the same. Travel expenses, Officers, about the same; Council, the same; Executive Committee, the same; the Executive Secretary, increased $500. A.M.A. meeting expenses: Now, in previous years, this has been in the neighborhood of $4,000 or $5,000. This year it is projected for not one meeting of the A.M.A. as it has in the past, but two meetings. There are two meetings of the House of Delegates of the American Medical Association each year instead of one, and that necessitates all of our delegates going, travelling expenses, etc., so that amount is increased a little over last year—last year it was also expenses for two meetings of the A.M.A. Council-Executive Committee expenses, $1,500, the same. Annual Session, $12,000 last year, $14,000 projected for the coming year, an increase of $2,000. Employees' Annuities, reduced from $200 to $54 (and I may add there is a plan for an insurance scheme for annuities for employees). The item for the Department of Public Relations is for the legislative year just past, 1947, and the work done during that year on continuing projects, $190,000; for the coming year, $146,000, which is a reduction of $44,000. New Mexico Physicians' Service: In the year 1947-48 we loaned money to that organization at the rate of $750 a month. The last of that money is gone. There will be no further loan to the New Mexico Physicians' Service after the last day of this month. The Cancer Commission, the usual appropriation of $5,000. Medical Defense, $10,000 set up last year, and nothing for this year because the Committee on Medical Defense will not need money. Committees' Expenses, committees for the Constitution and By-Laws of the Constitution, Fee Schedule Committee—you have to do some traveling—are set at the same level as last year. The Council projected $10,000 for postgraduate activities. As you know, we now have a full scale postgraduate activity scheme going. This is an increase of $7,500. Just a little while ago, the House of Delegates voted to make that $18,000, and so that amount is increased by $15,500 over last year. Public Policy and Legislation, $50,000, the same for the coming year. Last year the United Public Health League, which is the group in Washington, and which is supported at the pro-rata per member, is $15,000. Benevolence Committee, $1.00 per member, $9,000, up $500 because there are 500 more members this year than last. Sec-

retarial Conference, $1,500 last year, and $1,500 this year. The item, donations to libraries, at 50 cents a head is up from $4,250 to $4,500 because there are 500 more members. The Legal Department previously has had a retainer of $6,000, and has had an expense account of approximately $1,500. In legislative years, the legal department usually does an extremely long and arduous job for which they present us with an additional bill. It has been fixed now by the Council on investigation that the amount to legal department would be increased by $4,500. Women's Auxiliary, $750, the same. Equipment Expense, the same. Miscellaneous and Contingency Fee at $1,000 rather than $3,000. The cost of the administration, printing, and distribution of the official journal of the C.M.A.: printing last year was put at $45,000, and the rate is already increased; it will cost us approximately $75,000 to print the journal for the next year. This is an increase of $30,000. Postage and mailing increased $500 due to increase in the number of journals and the number of advertising and sales expenses. Discounts and Collections, an increase of $600 to $1,000. Salaries, $5,400, with an increase to $10,000 due to more needed increases in salaries, up $4,600. Supplies and office postage, the same. Illustrations: Dr. Wilbur asked that an additional amount be allowed for this to improve the character of the journal. This is reflected in the budget in an increase of $1,000. Addressograph Expense, increased to $1,000, and Editorial Board Travel, $300, the same. The grand total of expenses, $450,154. With the addition of $8,000 just voted by the House of Delegates to add to the postgraduate program, $458,154.

The income, to allow for contingencies, is fixed about as follows: You can judge, with 9,000 members, that the dues needed to get $450,000 would be approximately $50 each. Advertising sales, $75,000, which about pays for the printing of the journal. Journal Subscriptions, $1,000. Reprint Sales, projected, $500. The Annual Session, $10,000—that is income from advertising and exhibitors. Miscellaneous, including earned income, interest, etc., $1,000, down to $750 this year. This, gentlemen, gives you a projected total income of about $537,000 with a projected expenditure of $458,000. In order to carry on with any degree of safety, without going into our reserves, it would mean that each of the 9,000 members would have to pay $50 dues for the year. That is the explanation of the amount of dues fixed by the Council.

SPEAKER ALESEN: Motion on the adoption of the budget and setting of dues as indicated in the budget.

DR. BRUCK: I move the adoption of the budget as printed.

SPEAKER ALESEN: Moved and seconded that the budget be adopted as printed. That also contains a setting of annual dues for members at $50 because that provision is made in the budget. Is there any discussion? Are you ready for the question?

DR. MOORE: Mr. Speaker, I think we have passed a resolution this evening to set up a branch office in Los Angeles. I see no provision in the budget to take care of that.

DR. BRUCK: Mr. Speaker, I can't answer that. The Council has had under advisement for some time, pending further study, and so reported in the additional Council report on Sunday night, a proposal for a branch office in Southern California. Just what this would cost I do not know. As you see, there is some excess in the proposed possible income over the proposed expenditure, and I'd like to ask Mr. Hunton what such an office set-up would entail in the way of money.

MR. HUNTON: Mr. Speaker, Members of the House, this subject has been under discussion, but no concrete plans have yet been made for the opening of this office or the manner in which it is to be maintained. In my opinion, an office in Los Angeles could well serve the needs of my office, of Mr. Hassard's office, and of the Advertising Department of the JOURNAL. I believe such an office could be maintained at an annual expense of not more than $3,000—on a conservative basis, probably with part-time help, or with secretarial service provided in one of the buildings downtown. That's about as close an estimate as I would be able to make at this time.

DR. BRUCK: Also, I believe that with an office down there, certain items—travel expenses and certain other things—might be saved. Probably we would save a good deal on telephone calls, etc., and it seems to me that that is the amount that it might be figured out on; it could be maintained on a basis of that much, and if it necessitates more at a later date, I think we have a contingency fund, and we're certainly not broke.

SPEAKER ALESEN: Is there further discussion on the adoption of the budget, and the setting of the dues for 1949 at $50? Is there income from the reserve fund? Can you tell us what that is?

DR. BRUCK: At the present time there is in United States 2½ per cent government bonds, $865,000. At 2½ per cent, that would be $20,000 a year.

MR. HUNTON: I might answer to the effect that the reserve funds of the Association are held by the Trustees of the California Medical Association, a corporation, which serves as a holding company, and the income for the Trustees of the C.M.A. is not represented in any way in this budget.

DR. ALESEN: Is there further discussion? All those in favor signify by saying "aye." (General assent.)

DR. BRUCK: Mr. Speaker, I will call your attention to the fact that, in the additional Council report on Sunday night, the formula was set up for the matter of life membership. I'll read to you again, if I may, that section of the report because, with the fixing of the dues, it has more meaning: "At the same time, the Council fully recognizes the undesirability of the present life membership fee contained in the Constitution, and urges the House of Delegates to consider it carefully before adopting it. If the amendment is adopted, the House of Delegates is urged to exercise its power under the new amendment to set the life membership fee. In this connection the Council recommends that if the pending Constitutional amendment be adopted, the House of Delegates at

a second meeting of this section, to be held Tuesday, April 13, fix the life membership fee during the ensuing year at ten times the 1948 annual dues for those applicants over 50 and under 60 years of age; seven times the 1948 annual dues for those applicants 60 and under 65 years of age, and three and one-half times the 1948 annual dues for those applicants 65 and under 70 years of age. It is further recommended that life membership fees be applicable to all applicants voted on by the Council at any time from the adjournment of the House of Delegates at this session to the adjournment of the House of Delegates at the 1949 session, and that in the 1949 session memberships be again considered for the following year." Mr. Speaker, I want to place this paragraph in the form of a motion for action by the House of Delegates.

SPEAKER ALESEN: Is there a second? Is there discussion? Is this clear to the House, that the purport or content of this resolution is to ask you to set the life membership fees on a scale of ten times the annual dues for those over 50 and under 60, seven times the annual dues for those 60 to 64, and three and one-half times the annual dues for those from 65 to 70. Is there discussion? All those in favor signify by saying "aye." (General assent.) So ordered. Is there any unfinished business, Mr. Secretary?

SECRETARY GARLAND: We have no unfinished business.

SPEAKER ALESEN: Is there any new business, Mr. Secretary?

SECRETARY GARLAND: We have no new business.

SPEAKER ALESEN: Does any member of this House have any new business to present at this time? If not we will proceed to the presentations of officers. Dr. Askey.

DR. ASKEY: Mr. Speaker, members of the House of Delegates. Acceptance of such an honor as you have just given me is a privilege, and I recognize it as such, but my privilege also imposes a responsibility. In the year ahead of me my endeavor will be to fulfill that obligation, remembering that to no one group, to no one friend, to no one district, to no one principle am I bound. I am bound to promote the welfare of the people in our profession. If we may judge the future by the past, many problems will arise during my term of office. I'm not so conceited as to believe that I alone can solve them. I will need your wisdom, your guidance, and your support. I do believe, though, that we can succeed. Discouragement at times will sap our strength; injustice will appear occasionally to prevail; fear will smite our reason, and personal animosities, if allowed to smolder, may threaten at times to consume our all. May we then, together, accept our duties with the obligations they impose. May we receive them with the dignity that they bear, and may we perform them as becomes those gifted with patrician soul. Perhaps what I have said is unnecessary. After I decided to phrase these thoughts, I remembered the words of Isaiah of old, who sends to the California Medical Association tonight a message. He said, "Strengthen ye. The weak hands confirm the feeble needs. Say to them that are of a feeble heart, 'Be strong, fear not, then the eyes of the blind shall be opened, and the ears of the deaf shall be unstopped. then shall the lame man leap as a hart, and the tongue of the dumb shall sing, and a highway shall be there, and sorrow and sighing shall flee away'."

SPEAKER ALESEN: Now, ladies and gentlemen of the House of Delegates, it is a pleasure to present your new President-Elect, R. Stanley Kneeshaw, of San Jose. Dr. Kneeshaw.

DR. KNEESHAW: Ladies and gentlemen, it is indeed a great pleasure to have been honored so tonight. I know that even after I spend my one year in the apprenticeship of this orator—who you can see has had a very good training—I will have lots of problems that I will not be able to solve. But I want you to know that I will do my best to promote progress in this organization so that we who are all medical men and women will be able to accomplish much more efficiently the things we should accomplish. Thank you.

SPEAKER ALESEN: Now may I next present your Vice-Speaker—Dr. Charnock?

DR. CHARNOCK: Thank you very much. May I present the Speaker?

SPEAKER ALESEN: Dr. Sam McClendon, as past president of the California Medical Association, has a very timely and historic duty to perform. Dr. McClendon.

DR. MCCLENDON: Mr. Speaker, Members of the House of Delegates, and you officers of the Association. It is always a pleasant privilege and an honor to perform the task imposed and that I am going to perform tonight. I can say with you, and I'm quite sure I'm certain for myself without question, that you have had an able leader this year. It has been an extreme privilege for me, and I know for you, to serve under his leadership, and have the benefit of his initiative and thinking. I'm sure there are many regrets that he is now passing on into the mere oblivion of Past President, but there are still some pleasant things we can say about him, and although it is only a small token, I can assure you it is a great pleasure to have this plaque. I have one, and it occupies a prominent place in my office. It is a great privilege to present this token of our esteem.

DR. CLINE: Mr. Speaker, Dr. McClendon, I want to thank you for your very kind words, but more particularly I want to thank the members of the Association for the almost uniform support that has been accorded the program of the Association and the Officers of the Association this year. I think one of the most heartening things to one who has the interests of medicine sincerely at heart is the fact that medical men will stand together and will submerge self and selfish interests, and will unite hands behind a proper and constructive program. In my successor you have a man of unusual capabilities. I have had the opportunity of working with him for a great many years. As to his appeal for your guid-

ance and cooperation, I only hope that you really give him a full measure of it. You gave me an excellent measure of it, and I hope you do better by him. I know he will do better by you. Thank you very much.

SPEAKER ALESEN: It is customary to request the House to authorize the President, the Speaker, and the Secretary-Treasurer to approve the official minutes. A motion to that effect is in order. All those in favor signify by saying "aye." (General assent.) Is there any further business to come before the House? If there is nothing further, the meeting is adjourned.

(Adjourned 12:10 a.m.)

In Memoriam

ARNOUT, JOHN CLARK. Died in Los Angeles, March 14, 1948, age 70. Graduate of Creighton University School of Medicine, Omaha, Nebraska, 1907. Licensed in California in 1921. Doctor Arnout was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

✤

KING, JESSIE ALEXANDER. Died in Ojai, March 31, 1948, age 72, after a long illness. Graduate of the St. Louis College of Physicians and Surgeons, Missouri, 1905. Licensed in California in 1921. Doctor King was a retired member of the Ventura County Medical Society, and the California Medical Association.

✤

MCLAIN, LIVA CHARLES. Died in Bakersfield, April 18, 1948, age 62. Graduate of Rush Medical College, Illinois, 1915. Licensed in California in 1916. Doctor McLain was a retired member of the Kern County Medical Society, and the California Medical Association.

✤

PATTERSON, LLOYD HOYT. Died in Los Angeles, April 5, 1948, age 38. Graduate of the University of Southern California School of Medicine, Los Angeles, 1938. Licensed in California in 1941. Doctor Patterson was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

✤

ROWELL, HUBERT NATHAN. Died in Berkeley, April 2, 1948. age 79, after a short illness. Graduate of the Cooper Medical College, San Francisco, 1890. Licensed in California in 1890. Doctor Rowell was a retired member of the Alameda County Medical Society, the California Medical Association, and an Affiliate Fellow of the American Medical Association.

✤

TRABER, CHARLES HOLMES. Died in Reedley, March 19, 1948, age 70, of a heart attack. Graduate of Chicago College of Medicine and Surgery, Illinois, 1913. Licensed in California in 1914. Doctor Traber was a member of the Fresno County Medical Society, the California Medical Association, and the American Medical Association.

NEWS and NOTES

NATIONAL • STATE • COUNTY

BUTTE

The Butte County Hospital has entered into a contractual agreement with the California State Department of Public Health for the hospitalization of patients with syphilis.

CONTRA COSTA

Dr. Edwin W. Merrithew, who has been Contra Costa County medical officer for 34 years, will retire as county health director July 1, it was announced recently.

LOS ANGELES

Members of the Galen Club of Long Beach, which this year is celebrating its 20th anniversary, recently took time off from their more serious purpose of advancing the science of medicine to hold their annual Gridiron Banquet, at which they presented skits poking fun at themselves and their older colleagues. All members of the club are under 40 years of age. Dr. Richard Mattock is president, Dr. William Durnim vice-president, and Dr. James V. Keipp, secretary-treasurer.

* * *

Birmingham Veterans Administration Hospital on July 1 will have vacancies for four residents in medicine, three in neurology, two in psychiatry and two in pathology, Dr. E. V. Edwards, manager of the hospital, announced recently. The hospital is approved by the American Specialty Boards for residencies in each of these categories, Dr. Edwards said.

RIVERSIDE

Dr. Henry D. Stailey has been appointed acting health officer of Riverside County to take the place of Dr. Warren Fox, who resigned.

SAN BENITO

Hollister and San Juan Bautista have entered contracts for public health service by the San Benito County Department of Public Health.

SAN BERNARDINO

The city of Barstow, which was incorporated in November, 1947, recently entered an agreement putting it under the health supervision of the Health Department of San Bernardino County.

SAN DIEGO

Applications for examinations to qualify for the position of Chief of the Bureau of Preventive Medical Services of San Diego County are being solicited by the County Civil Service Commission. Salary range for the position, which is to be filled before July 1, is $587 to $647 a month.

SAN FRANCISCO

Dr. Frederick C. Cordes of San Francisco and Dr. William L. Benedict, Rochester, Minn., were elected U. S. vice-presidents of the Pan American Association of Ophthalmology at the Third Pan American Congress of Ophthalmology held in Havana, Cuba.

Announcement of three postgraduate courses to be given in San Francisco this summer and fall has been made by the University of California Medical School.

1. Internal Medicine and General Surgery, June 21-25.
2. Diseases of the Chest, with American College of Chest Physicians and Stanford University School of Medicine, September 13-17.
3. Psychiatry and Neurology, at the Langley Porter Clinic, 12 weeks, full time, August 30-November 19.

* * *

Hospitalization of a patient for treatment for Q fever, believed to be the first case of the disease reported in San Francisco, was announced recently by Dr. J. C. Geiger, San Francisco Director of Public Health. The patient, a 35-year-old white male, had been a resident of California for three years, and had traveled in Northern California. He had been in Malaya a year before hospitalization and there had had chills and fever which he took to be the result of malaria and which he treated with quinine. There was a recurrence several months later, before admission to the hospital.

* * *

A state charter has been granted to the California Academy of General Practice as a unit of the American Academy of General Practice which was founded a little more than a year ago, according to recent announcement by Dr. Francis Hodges of San Francisco, secretary-treasurer of the state chapter.

Other officers elected at the group's first meeting are: President, Dr. Ivan Heron, San Francisco; vice-president, Dr. Frederick Ewens, Los Angeles. Dr. Grant Ellis of Berkeley, Dr. Clarence Halburg of Redlands and Dr. Dave Dozier of Sacramento are members of the board of directors.

* * *

The University of California Medical School's gold-headed cane, awarded each year to the most outstanding member of the graduating class, this year went to John Vito Corbone of Roseville, California.

SANTA CRUZ

Two physicians, both veterans of World War II, have been appointed to residencies in Santa Cruz County Hospital. They are Dr. Phillip Sanfilippo, who received his degree in medicine from Creighton College in Omaha, and Dr. Elliott L. Harlow, a graduate of the University of Colorado School of Medicine. Dr. Sanfilippo served in the Navy, and Dr. Harlow in the Army.

* * *

Dr. John O. Raffety has retired as medical director of the Santa Cruz County Hospital and appointment of Colonel Robert C. Murphy, Medical Corps, U.S.A. (retired) to fill the position has been announced. Dr. Murphy told the county board of supervisors it was his intention to obtain a teaching staff for the hospital so that it may qualify as a place for training of interns in medicine.

GENERAL

Appointment of Dr. John R. Heller as director of the National Cancer Institute has been announced by the U. S. Public Health Service. He succeeds Dr. Leonard A. Scheele, the new Surgeon General. Dr. Theodore J. Bauer, formerly

venereal disease consultant for the U.S.P.H.S. in the San Francisco office, has been named chief of the Division of Venereal Diseases, the position occupied by Dr. Heller before his present appointment.

* * *

The death rate from all causes among United States life insurance policyholders reached a new low in 1947 at 737.9 per 100,000, with declines shown for practically all causes of death including heart disease and cancer, the Life Insurance Association of America reports. The 737.9 rate compares with 773.1 in 1946 and 763.9 in 1942, the previous lowest rate. These results are indicated by the experience of companies representing 73 per cent of the ordinary and industrial life insurance policies in force in all companies in the United States.

Heart diseases of all kinds constituted the leading cause of death among policyholders last year. Nearly half of all the deaths included in the survey were attributed to heart diseases, cerebral hemorrhage and nephritis. The combined death rate from these causes in 1947 was 361.5 per 100.000 policyholders. This is about 1 per cent lower than the corresponding rate in the previous year, due chiefly to improvement among industrial policyholders.

Cancer, the second leading cause of policyholder deaths, also declined during 1947, the first drop in several years. The 1947 death rate of 114.8 compares with 116.9 in the previous year and 106.8 in 1942. The death rate from tuberculosis declined to a new low of 26.1, nearly one-quarter lower than that for 1942.

* * *

Dr. Wilton L. Halverson, California State Director of Public Health, has been named to honorary life membership in the American Social Hygiene Association in recognition of outstanding service in the field of social hygiene.

* * *

The Indianapolis Medical Society announces that the following statement of policy was adopted unanimously at a meeting April 27:

"We, the members of the Indianapolis Medical Society, do hereby resolve that the welfare of the medical profession, its scientific advancement and the furtherance of public interest are continuously being harmed by organizations which demand compulsory attendance of physicians at meetings.

"To this end we instruct our duly elected delegates to the Indiana State Medical Association to introduce proper measures at the next meeting of the House of Delegates to the effect that all organizations which require compulsory attendance at their meetings no longer be approved by the American Medical Association; and, we further instruct our delegates to use their utmost influence to obtain passage of such a resolution at the earliest opportunity before the House of Delegates of the American Medical Association.

"The Indianapolis Medical Society furthermore instructs its secretary to send a copy of this resolution to every component Medical Society in the United States."

The 13th annual convention of the National Gastroenterological Association will be held at the Hotel Pennsylvania in New York, June 7-10.

* * *

The American College of Chest Physicians will hold its 14th annual meeting in Chicago, June 17-20, with headquarters in the Congress Hotel.

* * *

The report of Proceedings of the Fourth International Congresses on Tropical Medicine and Malaria, held in Washington, D. C., May 10-18, is expected to be published about January 1, 1949, the U. S. Department of State announced. Copies may be ordered from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. The price per copy has not yet been determined.

* * *

The American Congress of Physical Medicine will hold its 26th annual scientific and clinical session September 7-11, at the Hotel Statler, Washington, D. C. All sessions will be open to members of the medical profession in good standing with the American Medical Association. In addition to the scientific sessions, the annual instruction courses will be held. Full information may be obtained by writing to the American Congress of Physical Medicine, 30 North Michigan Avenue, Chicago 2, Illinois.

* * *

A Section on Allergy, to be known as the California Society of Allergy, which will hold scientific meetings as a part of the program of the annual sessions of the California Medical Association, was established at the time of the C.M.A. meeting last April in San Francisco. Dr. Willard S. Small was elected temporary chairman of the Section, and Dr. Frank G. Crandall, Jr., temporary secretary. Officers of the Society, also elected at the meeting, are Dr. George Piness, president; Dr. Albert H. Rowe, vice-president; Dr. Crandall, secretary; and Dr. Milton M. Hartman, treasurer.

* * *

Dr. Harold M. F. Behneman, Palm Springs, was elected president of the California Society of Internal Medicine at the annual meeting of that organization in San Francisco last April. Dr. H. Gordon MacLean of Oakland was elected vice-president, and Dr. Donald Carson of San Francisco, secretary. Councilors elected are Dr. Lewis Bullock, Los Angeles County; Dr. DeWitt Burnham, San Francisco; Dr. Gurth E. Carpenter, Los Angeles County; Dr. Earl O. G. Schmitt, Santa Clara County; and Dr. Neville T. Ussher, Santa Barbara County.

The Society announced that the following Doctors who are in a retired status and who have contributed to medicine in California were elected to honorary membership: Thomas Addis, San Francisco; George Blumer, Pasadena; Robert N. Bramhall, Fair Oaks; Charles Miner Cooper, San Francisco; George Dock, Pasadena; Donald Jackson Frick, La Verna; Robert Langley Porter, San Francisco; Herbert C. Moffitt, San Francisco; Ray Lyman Wilbur, Stanford University.



INFORMATION

ATS States Policy on BCG

Vaccination with BCG does not provide complete protection against tuberculosis and, until further controlled studies are conducted, cannot be recommended for the general population. However, since it appears to provide some degree of protection, its use is recommended for members of groups constantly exposed to tuberculosis if they have a negative reaction to the tuberculin test.

These conclusions are contained in a report submitted by the Chemotherapy Committee of the American Trudeau Society, Medical Section of the National Tuberculosis Association, to the ATS Executive Committee in January, and adopted by the latter as a statement of policy on BCG.

The complete report follows:

The members of the Society and other physicians in the United States have been interested for many years in the active immunization against tuberculosis with BCG. The expansion of public health activities in the field of tuberculosis control by official and voluntary agencies and the acquisition of new knowledge concerning immunity in tuberculosis have prompted the American Trudeau Society to make the following observations and recommendations:

I. BCG vaccine, prepared under ideal conditions and administered to tuberculin negative persons by approved techniques, can be considered harmless.

II. The degree of protection reported following vaccination is by no means complete nor is the duration of induced relative immunity permanent or predictable. The need for further basic research on the problem of artificial immunization against tuberculosis is recognized and is to be emphasized. Studies should be directed: (a) toward the improvement of the immunizing agent, (b) to the development of criteria for vaccination and revaccination and (c) to determine more accurately which groups in the general population should be vaccinated. Several well controlled studies are under way at the present time and it is expected that others will begin within the near future.

III. On the basis of studies reported in the European and American literature, an appreciable reduction in the incidence of clinical tuberculosis may be anticipated when certain groups of people who are likely to develop tuberculosis because of unusual exposure, inferior resistance, or both, are vaccinated.

A. In the light of present knowledge, vaccination of the following more vulnerable groups of individuals is recommended, provided they do not react to adequate tuberculin tests.

1. Doctors, medical students and nurses who are exposed to infectious tuberculosis.

2. All hospital and laboratory personnel whose work exposes them to contact with the bacillus of tuberculosis.

3. Individuals who are unavoidably exposed to infectious tuberculosis in the home.

4. Patients and employes of mental hospitals, prisons and other custodial institutions in whom the incidence of tuberculosis is known to be high.

5. Children and certain adults considered to have inferior resistance and living in communities in which the tuberculosis mortality rate is unusually high.

B. Vaccination of the general population is *not* recommended at this time except for carefully controlled investigative programs which, as a rule, will be best carried out under the auspices of official agencies such as the U. S. Public Health Service, state and municipal health departments and other especially qualified groups.

IV. BCG vaccine should not be made available for general distribution in the United States at this time because: (a) the most effective strain of BCG has not been agreed upon nor has fully satisfactory standardization of the vaccine been achieved, (b) the best qualified experts have not agreed as to the most effective method of vaccination and (c) fully satisfactory arrangements have not been perfected for transportation and storage of the vaccine.

The vaccine should be prepared only in accredited laboratories especially devoted to this task, in which virulent tubercle bacilli are not cultivated or handled and in which all other possible precautions are exercised to assure safety and quality of the product.

Adequate record systems should be devised for management of the statistical problems involved in recording and following large numbers of vaccinated people. These and other problems of particular importance are now being studied on an extensive scale by official and voluntary agencies in the United States and in close collaboration with European scientists experienced in this field.

V. The Society believes that since BCG vaccination affords only incomplete rather than absolute protection, the most effective methods of controlling tuberculosis in the general population are: (a) further improvement of living conditions and the general health, (b) reduction of tuberculosis infection, which can be accomplished by modern public health methods and the unremitting search among presumably healthy individuals for patients with infectious tuberculosis, (c) prompt and adequate medical and surgical treatment of patients with active disease, (d) segregation and custodial care of those not amenable to accepted forms of therapy and (e) adequate rehabilitation.

SIGNIFICANT ADVANCES

Fortunately, great advances have been achieved during recent years in the development of diagnostic methods applicable on a mass scale and there have been significant improvements in the surgical and medical treatment of tuberculosis. The expansion of modern diagnostic, therapeutic and rehabilitation

facilities is required at this time to make full use of these new methods which can accomplish further dramatic reduction of tuberculosis mortality and morbidity rates in the United States.

It is to be emphasized that BCG vaccination must not be regarded as a substitute for approved hygienic measures or for public health practices designed to prevent or minimize tuberculous infection and disease. Vaccination should be regarded as only one of many procedures to be used in tuberculosis control. Vaccination seems unwarranted: (a) in areas in which the tuberculosis mortality rate is extremely low and (b) in localities in which the tuberculin test is of especial value as a differential diagnostic procedure.

Irwin Memorial Blood Bank

Although the total number of donors accepted by the Irwin Memorial Blood Bank of San Francisco in 1947 was 21.5 per cent greater than the total for the preceding year, more are needed to fill increasing demands, according to a report signed by Anthony J. J. Rourke, M.D., chairman of the Physicians of the Blood Bank Commission.

The Bank, which was founded in 1941 by the San Francisco County Medical Society, is operated as a non-profit organization to provide transfusion service to over 55 hospitals serving a population of more than one and a half million in San Francisco and Marin Counties. Recently the Bank has received an increasing number of requests to extend the service to other areas.

Purposes of the Blood Bank are:

1. To provide whole blood and plasma at cost to patients in need of such therapy.

2. To be certain blood transfusions were available for all patients regardless of their ability to pay the service fee or provide donor replacements.

3. To process and distribute plasma to ships of allied nations and in addition to create a plasma reserve for the people of San Francisco.

In serving these purposes, the Bank at present is taking blood from between 1,900 and 2,000 donors a month and distributing over 1,800 units of whole blood and plasma to hospitals. In 1941 when blood was procured from 200 donors and hospitals were requesting 50 to 100 units a month for patients.

The management of the Blood Bank sets forth the following ways by which a fresh, adequate supply of blood can be maintained through donations:

1. *Bank Deposits.* Donors may deposit blood to aid the Bank and its humanitarian work. These deposits help keep a surplus in the refrigerator for patients in need. A donor contributing to the "Bank" is given a credit for a period of one year and during that time, the credit is available for relatives or friends as replacement for blood provided by our Bank upon the authorization of the donor.

2. *Reserve Funds.* Many business firms, societies and fraternal organizations are encouraging members to start a Reserve Fund with the Blood Bank. All deposits to a Reserve are held for a period of one year and when any member of the organization or his immediate family is in need of a transfusion, the replacement is debited from the Fund upon the authorization of the Reserve Fund Chairman. Funds are kept active by the regular periodical donations of the members; and, in this way, stocks of fresh blood are materially aided. This worthwhile plan has great appeal and the Bank directors ask your cooperation and assistance in encouraging Reserve Funds.

3. *Hospital Replacements.* Donors deposit blood to replace units supplied patients having blood transfusion therapy in local hospitals.

Not every donation given to the Bank may be used. The Bank occasionally suffers losses as indicated below:

1. Not every donor can give a full pint of blood, yet full credit is given.

2. All blood drawn does not meet the standards of our laboratory tests, although full credit is given the donor.

3. The Bank must stock all four types of blood, yet does not specify the donor must be a certain type when making replacements. Often the donor does not have the type immediately required by the Bank, making it necessary to have additional donations.

The Irwin Memorial Blood Bank does not buy or sell blood. When blood is supplied to a patient by the Bank, a service fee of $6 is charged for each unit of whole blood provided. This is the actual cost of drawing, preparing, packaging and transporting the blood from the Irwin Memorial Blood Bank to the hospital. In addition to this service fee, each unit of blood withdrawn from the Bank must be replaced in order that blood may be available for other patients in need of transfusion. To insure a blood donor replacement, the hospital charges the patient a $25 "professional donor fee" for each unit, making the total cost of transfusion $31. In order that the $25 professional donor fee may be refunded to the patient, the blood must be replaced by the *patient's family or friends,* or by a *previously established Reserve Fund or Bank credit.* Should this procedure not be followed, the hospital must pay a donor the professional fee to make the replacement and the patient, therefore, forfeits all claim to a refund. The Blood Bank, the hospital and the patient's physicians encourage voluntary replacements in order that the patient may take advantage of a transfusion for the low cost of $6. This replacement plan constitutes a great monetary saving that was not possible in the time before non-profit Blood Banks were in operation and the cost of transfusions was often $50 to $75.

To keep the Bank in operation, the services of a paid staff of 28 professional and technical employees are required. In addition, a corps of 65 volunteers per week is needed to deliver blood to the hospitals, prepare sterile supplies, serve in the canteen and act as hostesses. New recruits to the volunteer group are sought. Persons desiring to donate their services are requested to telephone the Blood Bank. Donors also are needed. The number is WAlnut 1-5600.

BOOK REVIEWS

PRACTICAL OFFICE GYNECOLOGY. By Karl John Karnaky, M.D., Assistant Professor of Clinical Gynecology, Baylor University College of Medicine. Charles C. Thomas Publishers. Price, $7.50.

Karnaky calls this tome of 224 pages a "practical gynecology" and as judged by the ambitious table of contents at the head of each of the sixteen chapters it is meant to serve as a quick refcrence guide to the principles and practices of gynecologic therapy. Yet, Karnaky devotes nearly half of his monograph to the discussion of his impressions and experiences with stilbestrol as he has used this and kindred substances in the treatment of a variety of gynecologic disorders. No doubt much of this is valuable information offered with zealous finality by an unorthodox clinical experimenter, yet in the mind of the reviewer who has read this controversial tome three times there arises doubt that such finality of opinion is indicated at this stage of our knowledge of female endocrinology. If the book were called an account of personal experiences in gynecologic therapy there could be no question as to its intent and purpose but its present title presupposes a more inclusive discussion of the subject matter. The author is a great believer in the use of stilbestrol which evidently he uses to cure most diseases of the female generative system. He cites figures which though often not controlled are impressive, to say the least, and because by oversimplifying his subject his statements read convincingly. Karnaky discusses all the phases of stilbestrol therapy, their action and advantages but is little concerned with the disadvantages which, he says, will be overcome if the substance is used consistently. He advises the use of huge doses of stilbestrol or kindred substances for the control of so-called functional bleeding and he is of the opinion that none of these substances bears directly on pelvic cancer though he warns against their use in suspected breast and endometrial cancer. All of this and much more will make interesting reading for the discriminating practitioner.

The book also contains good information on vaginal cytology, the meaning and interpretation of vaginal pH, the various methods used in determining ovulation and their relative merits, newer aspect in the study of sterility and vaginal trichomoniasis. The chapters on genital tract infections, disorders of the cervix, dysmenorrhea, uterine displacement and tubo-ovarian disorders have been treated rather too briefly unless the particular therapy is concerned with the use of stilbestrol. The last chapter of the book is devoted to a brief discussion of the psychologic aspects of gynecology. It did not impress the reviewer as being adequate in its scope and presentation.

Karnaky's monograph is pleasingly presented and extensively illustrated. Colored plates have been used extravagantly, though many will be familiar to the reader of pharmaceutical advertisements.

* * *

THE DOCTOR IN OREGON. By O. Larsell, Professor of Anatomy, University of Oregon Medical School. Published by Binfords and Mort for the Oregon Historical Society, Portland, Oregon. Price, $10.00.

This is a most complete and well-documented history of medicine in Oregon from the time of the Indian shaman to the present decade.

Unlike many histories—so often a boring compilation of biographies—this is very enjoyable reading, made so by descriptions of disease and trauma encountered in the practice of medicine during periods of explorer, teacher, missionary and pioncer. Case histories and authentic anecdotes bring life to the mass of factual data presented.

Subsections are devoted to societies, journals and schools in Oregon, and to the development of hospitals and public health activities.

We owe a debt of gratitude to Dr. Larsell for this record of medical evolution in a state which can well be proud of its doctors' achievements.

* * *

MANUAL OF CLINICAL THERAPEUTICS. By Windsor C. Cutting, M.D., Professor of Therapeutics, Stanford University of Medicine, San Francisco. Second Edition, Illustrated. W. B. Saunders Company, Philadelphia and London. 1948.

The popular pocket-sized manual has just been revised in this second edition of 712 pages. The print is large and the subject matter made easy to read by the direct and simple style of the author.

The general problems of treatment are first discussed by Dr. Cutting. Then he discusses categorically the problems of treatment of the various diseases. These treatments are clearly and honestly outlined. Several therapy is considered, and if pertinent to the case, specific and preventive measures are added. Good and worthless procedures are indicated. Metric measurements are given preference throughout the text. Apothecaries' measures are included in dosage tables and prescriptions in the appendices.

The treatments are brought up to date with the newer antibiotic and chemotherapeutic agents.

Many pertinent charts, tables, prescriptions, drug doses, diets and medical procedures are well chosen.

This manual is highly recommended to all medical students and practitioners because of its authoritative character.

* * *

THE YEARS AFTER FIFTY. By Wingate M. Johnson, M.D., Professor of Clinical Medicine and Chief of Private Diagnostic Clinic, Bowman Gray School of Medicine of Wake Forest College. Whittlesey House, McGraw-Hill Book Company, Inc., New York-London. Price, $2.00.

In The Years After Fifty, Dr. Johnson writes as an experienced doctor, discussing with his patients the assets and liabilities of maturity. In simple terminology he explains the physiological processes active in health and disease, presenting the problems realistically, yet in a manner to avoid undue alarm. Interspersed throughout are sympathetic expressions of the author's philosophy of living. Such a book as this one should prove valuable to recommend to patients desiring a simplified explanation of the medical problems occurring because of advancing age and serve to clarify misconceptions and allay the fears of those who are confused by the welter of pseudo medical information disseminated by word of mouth and by the lay press.

* * *

A MANUAL OF OTOLOGY, RHINOLOGY AND LARYNGOLOGY. By Howard Charles Ballenger, M.D., F.A.C.S., Associate Professor of Otolaryngology, Northwestern University School of Medicine, Chicago, Illinois. Third Edition, enlarged and thoroughly revised. Published 1947. Octavo, 352 pages, with 135 illustrations and 3 color plates. Cloth, Lea & Febiger, Philadelphia. Price $4.50.

This is not a first rate book but it may have some usefulness as a catalogue of ear, nose, and throat conditions. It is less expensive and takes up less room than most texts.

Despite "thorough revision" its general tone is that of the nineteen twenties. A gesture is made toward modern thinking by somewhat fuller mention of allergy, the sulfonamides, antibiotics and the newer procedures of the specialty such

as fenestration, irradiation of the nasopharynx, and operations for vocal cord paralysis. There is a short chapter on headache and facial neuralgia. However, the orientation is that of a by-gone era. It would seem that for medical students' use it would have been better to have made a fresh start than to have attempted this revision, which perpetrates the bad along with the good from the past.

* * *

ADVANCES IN MILITARY MEDICINE, made by American Investigators working under the sponsorship of The Committee on Medical Research. Edited by E. C. Andrus, D. W. Bronk, G. A. Carden, Jr., C. S. Keefer, J. S. Lockwood, J. T. Wearn, M. D. Winternitz. Volumes I and II with Illustrations. An Atlantic Monthly Press Book. Little, Brown and Company, Boston. $12.50 per volume.

This two-volume work is a significant contribution to the medical literature and represents a summary of the results of the great cooperative effort in medical research conducted by the Office of Scientific Research and Development, via its Committee on Medical Research. Much of the definitive data forming the basis of this review have been published, and in the foreword Alfred N. Richards, chairman of the Committee on Medical Research, states that already more than thirteen hundred papers describing specific aspects of the work have been published. The magnitude of the bibliography is also reflected in the seventy-six pages of references published under OSRD/CMR contract.

A history of the experiences of the CMR is outlined in Dr. Richards' foreword; he states that contracts were entered into with 135 universities, hospitals, research institutions and industrial firms, with an expenditure of approximately 25 million dollars. The fields of research were quite broad and included the problems of infectious diseases, experimental medicine, aviation medicine, nutrition, chemical warfare, anti-pest agents, antibiotics, etc.

The data presented in the various papers are authoritative and give an excellent summary of the medical advances under CMR contract. The information provided is too extensive for detailed review and only a few observations will be noted. Dr. Lockwood, in the section on surgery, emphasizes the fact that the outstanding accomplishments in military surgery during the war were the improvements in surgical resuscitation made possible by the availability of blood and plasma for transfusion in the forward areas, coupled with early surgical intervention.

The problem of frost-bite and trench foot was very real during World War II and Crismon states that the Finnish army reported five thousand cases of frost-bite in January of 1939, and that two to three million German soldiers in Russia were incapacitated by cold during the winter of 1942-43.

The advantages of pressure breathing in anoxia are clearly shown in the chapter by Millikan. An excellent discussion of shock by Richards, Fine, and Long is very profitable. Richards emphasizes the fact that the most striking discovery, of most practical significance, was that in shock following trauma, the decrease in blood volume is regularly associated with hemodilution, that the loss from the circulation is from whole blood and that it occurs at the site of injury. The estimate of the amount of blood lost in moderate and severe shock was found to be of the order of 1,500 to 2,000 c.c. of whole blood, or 30-40 per cent of the circulating blood volume. These data indicated that for sustained recovery from shock, the transfusions of large amounts of blood (preferably whole blood) was required. Long summarizes the important data concerning the effects of shock upon the kidneys and emphasizes the importance of early and adequate transfusion, so that the blood volume is restored as soon as possible. Once the secondary effects of prolonged exposure to a reduced blood volume have appeared, the treatment becomes progressively more difficult and if delayed too long, becomes impossible.

One of the most important and best-documented papers in the study is that of Cohn on the history of plasma fractionation; it is one of the most complete discussions of the subject available.

The tremendous labor expended on the problem of malaria and new insect repellents is impressive. Thousands of new synthetic candidate repellents were prepared and studied. The majority of these were entirely new compounds never before synthesized. The value of the new repellents in mosquito control can be summarized by noting that they were ten times as effective as the pre-war oil of citronella, and that in the liquid form for skin application, these new repellents were 100 per cent effective for over three hours. The magnitude of the clinical testing of anti-malarial drugs was revealed by Shannon's statement that about 14,000 compounds were surveyed for activity in avian malaria. The data on chloroquine and oxychloroquine are briefly discussed.

The chapter on penicillin by Keefer is a dramatic portrayal of the war-time achievements of our pharmaceutical firms. Keefer demonstrates the progress in the availability of penicillin by his statement that in the summer of 1941, there was not enough penicillin in this country to treat a single patient; in the spring of 1942, a sufficient amount had been produced to treat a single patient adequately; in 1943, wounded Pacific veterans received penicillin; and finally, by V-day, there was enough penicillin available for our armed forces, our allies, and, in a moderate amount, for civilians.

In addition to the valuable scientific information available in this two-volume work, one cannot help noting the splendid results that were accomplished in a short space of time by the cooperative efforts in all the medical sciences by the government, private industry, and university groups, including nearly 1,700 doctors and 3,800 scientifically trained researchists. The combined efforts, although the result of the exigency of war, clearly demonstrate the potentialities of such coordination of varied groups for peace-time needs. It is to be hoped that future cooperative research along the lines described in this book will continue, even though the war is over.

The two volumes can be very highly recommended to all physicians and scientists.

* * *

BLOOD PRESSURE AND ITS DISORDERS INCLUDING ANGINA PECTORIS. By John Plesch, M.D., Budapest; M.D., Germany. Second Edition revised and enlarged. The Williams and Wilkins Co.

In general, the ideas expressed in this book are not in harmony with current concepts.

* * *

PRACTICAL CHILD GUIDANCE AND MENTAL HYGIENE. By Samuel Kahn, M.D., Ph.D., Adjunct Professor of Psychology and Psychiatry at Long Island University—Grace Kirsten, A.B., formerly with the New York City Department of Education—and May Elish March, A.B., M.A., formerly a teacher in the New York City High Schools. Meador Publishing Co. $4.00.

This book is unique in that it is almost entirely in the form of questions and answers; the only exceptions are the short paragraphs at the beginning of each chapter. The questions are grouped according to subject matter into 24 chapters. A few titles of chapters will reveal the type of questions answered such as "Children and Jealousy," "Security and Insecurity," "Money in Childhood," "Sex in Childhood," "Overprotection and Underprotection."

The book obviously was written primarily for non-medical individuals dealing with children, namely parents, teachers, nurses, and social workers. However, the physician especially who, without the latest pediatric training must deal with children, will find it useful, for certainly practically every posed question is answered.

CALIFORNIA MEDICINE

Index to Volume 68, January-June, 1948

KEY TO ABBREVIATIONS USED IN INDEX

(Or.)—Original Article.
(Ed.)—Editorial.
(MP)—Medical Progress.
(CPC)—Clinical-Pathological Conference.
(CC)—Clinical Conference.
(CMA)—California Medical Association.
(CR)—Case Report.
(I)—Information.
(LE)—Letters to the Editor.
(BR)—Book Review.
(MJ)—Medical Jurisprudence.

AUTHOR INDEX

PAGE

A

Aird, Robert B., *San Francisco* 141
Andrews, Carroll, *Sonoma* 16

B

Bailey, Wilbur, *Los Angeles* 429
Baker, Charles P., *Oakland* 449
Barnett, Charles W., *San Francisco* 432
Barr, James A., *Oakland* 449
Barr, Richard H., *San Francisco* 437
Bissell, Dwight M., *San Jose* 270
Bogen, Emil, *San Fernando* 295
Boland, Edward W., *Los Angeles* 273
Bonar, Perry A., *San Rafael* 166
Bourne, Wesley, *Montreal, Quebec* 426
Bostick, Warren L., *San Francisco* 95
Bower, Albert G., *Pasadena* 409
Brady, J. H., *Visalia* 448
Brayton, Donald, *Los Angeles* 162
Breslow, Lester, *San Francisco* 346
Brewer III, Lyman A., *Los Angeles* 295
Brown, A. Lincoln, *San Francisco* 452
Bryant, Ben L., *Los Angeles* 359
Butler, Edmond Dana, *San Francisco* 70

C

Cattell, Richard B., *Boston* 416
Cheney, Garnett, *San Francisco* 419
Childress, Max E., *French Camp* 25
Clausen, Edwin L., *Oakland* 366
Cline, John W., *San Francisco* 331
Currier, W. D., *Pasadena* 88

D

Davis, Edward W., *San Francisco* 130
Delprat, G. D., *San Francisco* 76
Doyle, John B., *Los Angeles* 255
Dugan, David J., *French Camp* 25

E

Ellwood, Walter W., *Glendale* 296
Epstein, Norman N., *San Francisco* 374
Evans, Edward R., *Pasadena* 335

F

Farman, Franklin, *Whittier* 286
Ferrier, Paul A., *Pasadena* 357
Fisher, Louis J., *Los Angeles* 292
Fluhmann, C. F., *San Francisco* 159
Foord, Alvin G., *Pasadena* 421
Frost, David, *Oakland* 77

G

Gardner, Frank H., *San Francisco* 32
Garland, L. Henry, *San Francisco* 126
Gilman, P. K., *San Francisco* 135
Goin, Lowell S., *Los Angeles* 11
Goodman, Raymond D., *Los Angeles* 292
Grayson, Charles E., *Sacramento* 121
Griggs, Donald E., *Los Angeles* 292

H

Hall, Colby, *Los Angeles* 344
Haman, John O., *San Francisco* 353
Harding, Floyd E., *Los Angeles* 20
Henley, R. Bruce, *Oakland* 366
Hinman, Jr., Frank, *San Francisco* 338
Hinton, J. William, *New York* 424

PAGE

J

Jesberg, Simon, *Los Angeles* 303
Jones, Hugh T., *Los Angeles* 57
Jones, John C., *Los Angeles* 305

K

Kindall, Lloyd, *Oakland* 446
King, Earl B., *San Francisco* 74
Kinney, Lyell C., *San Diego* 288
Kirby, William M. M., *San Francisco* 414
Koke, Martin P., *San Diego* 370

L

Leary, Jr., William Gordon, *San Francisco* 147
Leeds, Sanford E., *San Francisco* 452
Long, Albert E., *San Francisco* 383
Lordan, John P., *Beverly Hills* 90

M

Macdonald, Ian, *Los Angeles* 1, 37
Meads, Albert M., *Oakland* 83
Melody, George F., *San Francisco* 378
Montgomery, Douglass W. 29
Moose, Ray M., *San Bernardino* 31
Morrison, Lester M., *Los Angeles* 261
Morrison, Lewis F., *San Francisco* 100

Mc

McCarthy, William D., *Oakland* 7

N

Naffziger, Howard C., *San Francisco* 130
Neal, W. S., *Visalia* 448
Neil, James M., *Oakland* 5
Neufeld, Alonzo J., *Los Angeles* 259
Newton, Albert H., *Yreka* 167
Nickels, Thomas T., *Oakland* 446
Noble, Charles A., *San Francisco* 443
Norris, William J., *Los Angeles* 162

O

Olsen, Sidney, *San Francisco* 440

P

Pflueger, Otto H., *San Francisco* 76

Q

Quinn, Robert W., *New Haven, Conn* 283

R

Raney, Aidan A., *Los Angeles* 65
Raney, Rupert B., *Los Angeles* 65
Rantz, Lowell A., *San Francisco* 437
Read, John M., *San Francisco* 432
Rees, Clarence E., *San Diego* 35
Regan, Louis J., *Los Angeles* 102
Reynolds, Eric, *Oakland* 14
Reynolds, Philip A., *Los Angeles* 151
Robinson, Paul S., *Los Angeles* 362
Rosson, Ray W., *Tulare* 137
Royston, E. A., *Los Angeles* 280
Ryan, Bernard F., *Oakland* 77

S

Samson, Paul C., *French Camp* 25
Sears, D. R., *San Mateo* 81
Selzar, Arthur, *San Francisco* 350
Sharp, George S., *Los Angeles* 457
Shimkin, Michael B., *San Francisco* 264

Simpson, Edmund E., *Sacramento* 295
Smith, Gordon Knight, *Los Angeles* 86
Steinberg, James, *Los Angeles* 27
Stephens, H. Brodie, *San Francisco* 388
Stiles, John A., *Palo Alto* 166
Strouse, Carl D., *Beverly Hills* 381
Strouse, Solomon, *Beverly Hills* 381
Sundberg, R. H., *San Diego* 99

T

Tasker, Samuel, *Los Angeles* 362
Templeton, H. J., *Oakland* 23
Thelander, H. E., *San Francisco* 78
Thompson, James H., *San Francisco* 95
Timme, Arthur R., *Los Angeles* 154
Thomas, S. F., *Palo Alto* 126
Thorn, George W., *Boston* 407

W

Ward, Robertson, *San Francisco* 170
Warner, George F., *San Francisco* 32

SUBJECT INDEX

A

Acute Appendicitis in Childhood; A Summary of Present Concepts, by William J. Norris and Donald Brayton, Los Angeles (MP) 162
Acute Puerperal Mastitis—A Review by William Gordon Leary, Jr., San Francisco (Or.) 147
Alcohol and Man (Ed.) 103
A.M.A. Interim Session (Ed.) 174
Anesthesia, What's New in, Wesley Bourne, Montreal, Quebec (Or.) 426
Anticoagulant Therapy in Postoperative Venous Thrombosis, J. William Hinton, New York (Or.) 424
Artificial Insemination, by John O. Haman, San Francisco (Or.) 353

B

Back Pain from the Gynecological Standpoint by Earl B. King, San Francisco (Or.) 74
Back Pain and Its Management by the General Surgeon, Low, by Edmond Dana Butler, San Francisco (Or.) 70
Back Pain from the Orthopedic Standpoint, Low, by Hugh T. Jones, Los Angeles (Or.) 57
BCG Vaccine (Ed.) 311
Benign and Malignant Prepyloric Lesions of the Stomach, by Gordon Knight Smith, Los Angeles (Or.) 86
Bleeding Nipple as a Diagnostic and Therapeutic Problem, The, by Ian Macdonald, Los Angeles (Or.) 1
Breast Cancer in Mice, by Michael B. Shimkin, San Francisco (Or.) 264

C

Cancer of the Larynx, by Simon Jesberg, Los Angeles (Or.) 303
Cancer of the Lip, by Ian Macdonald, Los Angeles (Or.) 37
Cancer of the Thyroid, Robertson Ward, San Francisco (Or.) 170
Cancer of the Oral Cavity, George S. Sharp, Los Angeles (Or.) 457
Cancer of the Tonsil and Pharynx, by Lewis F. Morrison, San Francisco (Or.) 100
Cancer of the Esophagus, H. Brodie Stephens, San Francisco (Or.) 388
Carcinoma of the Lung, by John C. Jones, Los Angeles (Or.) 305
Carcinoma of the Thyroid Gland (CS) 454
Cardiac Calcification, Annular and Valvular (Leaflet) by Charles E. Grayson, Sacramento (Or.) 121
Cause for the Reestablishment of Communication Following Ligation of Patent Ductus Arteriosus, A, by Clarence E. Reese, San Diego (Or.) 35
Choreiform Syndrome; Its Significance in Children's Behavior Problems, by Arthur R. Timme, Los Angeles (Or.) 154
Chylothorax, by R. H. Sundberg, San Diego (Or.) 99
Clinical Pathology, What's New in, Alvin G. Foord, Pasadena (Or.) 421
Clinical Significance of Chronic Parametritis, The, by C. F. Fluhmann, San Francisco (Or.) 159
Communicable Diseases, What's New in, Albert G. Bower, Pasadena (Or.) 409

D

Degenerative Lesions of the Shoulders as a Cause of Pain, by Alonzo J. Neufeld, Los Angeles (Or.) 259
Diagnosis of Early Breast Cancer, The, by William D. McCarthy, Oakland (Or.) 7
Diverticulosis and Diverticulitis of the Colon, by Robert W. Quinn, New Haven, Conn. (Or.) 283
Does Milk "Make Mucous?" by Ray M. Moose, San Bernardino (Or.) 13
Drastic Therapies (Ed.) 308

E

Early Diagnosis and Radical Treatment of Prostatic Carcinoma, The, by Frank Hinman, Jr., San Francisco (Or.) 338
Early Spondylarthritis of the Ankylosing Type (CC) 106
"Easy Bruiser" and Medical Care Plans, The (Ed.) 465
Emotional Factors in Obstetrical Practice, by Philip A. Reynolds, Los Angeles (Or.) 151
Endocrinology, What's New in, George W. Thorn, Boston 407
Etiology in the Development of the Ruptured Intervertebral Disc, A Consideration of, by Rupert B. Raney and Aidan A. Raney, Los Angeles (Or.) 65

F

Family Physician and Medical Education, The, by H. E. Thelander, San Francisco (Or.) 78
Fibromyosarcoma of the Gallbladder, Primary Spindle Cell, by James H. Thompson and Warren L. Bostick, San Francisco (Or.) 95
Friedreich's Ataxia with Unusual Heart Complications, by Walter W. Ellwood, Glendale (CR) 296
Further Study of Peumonia in San Francisco, 1944-1946, by George F. Warner and Frank H. Gardner, San Francisco (Or.) 32

G

Gastroenterology, What's New in, Garnett Cheney, San Francisco (Or.) 419
General Practitioner in Neoplastic Disease, Responsibility of the, by Louis J. Regan, Los Angeles (Or.) 102
Granuloma Inguinale, by David Frost and Bernard F. Ryan, Oakland (Or.) 77

H

Health Department's Role in the Cancer Program, A, by Lester Breslow, San Francisco (Or.) 346
Hemothorax in Relation to Benign Pelvic Tumors, by Albert E. Long, San Francisco (CR) 383
Hepatitis without Jaundice, by Solomon Strouse and Carl D. Strouse, Beverly Hills (CR) 381
Hiatus Hernia: Coincident Hematemesis, A. Lincoln Brown and Sanford E. Leeds, San Francisco (CR) 452
Hypersensitivity, the Common Denominator of the Collagenous Diseases, by Edward R. Evans, Pasadena (Or.) 335

I

Incidence of Unsuspected Urinary Tract Infection in a Selected Group of Ambulatory Women, The, Richard H. Barr and Lowell A. Rantz, San Francisco (Or.) 437
Industrial Medical Fees (Ed.) 309
Inoperable Cancer of the Breast, Management of, by Eric Reynolds, Oakland (Or.) 14

L

Laboratory and Diagnosis (Ed.) 392
Latent Malaria, by Edmund E. Simpson, Sacramento (CR) 295
Leprosy in Los Angeles, by Saul S. Robinson and Samuel Tasker, Los Angeles (Or.) 362
Leukonychia, by Douglas W. Montgomery (Or.) 29

M

Major Trigeminal Neuralgia, by Edward W. Davis and Howard C. Naffziger, San Francisco (Or.) 130
Management of Acute Neck Infections by Colby Hall, Los Angeles (Or.) 344
Medical Treatment of Urinary Tract Infection, Charles A. Noble, San Francisco (Or.) 443
Mesenteric Vascular Occlusion, by Albert H. Newton, Yreka (Or.) 167
Myocardial Infarction and Heart Failure, by Arthur Selzer, San Francisco (Or.) 350

N

Non-Calculous Biliary Tract Disturbances (Ed.) 173
Not by the Back Door (Ed.) 104

O

Ophthalmological Progress: Sight Restoration by Corneal Transplant, by John P. Lordan, Beverly Hills (Or.) 90
Opisthotonos Fetalis in Breech Presentation, by George F. Melody, San Francisco (Or.) 378
Oral Substitution Therapy with Benzestrol for Patients with Estrogen Deficiency, by Floyd E. Harding, Los Angeles (Or.) 20
Original Technique for Surgical Correction of Deep Paravesical Diverticula in Bad Risks, by Paul A. Ferrier, Pasadena (Or.) 357
Otological Diagnostic Clinics of California (Or.) 88
Overlooked Foreign Body in the Tracheobronchial Tree, by Max E. Childress, Paul C. Samson and David J. Dugan, French Camp (Or.) 25

P

Painful Breast, by James M. Neil, Oakland (Or.) 5
Penicillin Resistant Cases of Subacute Bacterial Endocarditis Successfully Treated with Massive Dosage, by Raymond D. Goodman, Louis J. Fisher and Donald E. Griggs, Los Angeles (CR) 292
Perinephric Abscess Secondary to Renal Infection, by Albert M. Meads, Oakland (Or.) 83
Persisting Hiccups, by John A. Stiles, Palo Alto (CR) 166
Post-Anesthesia Respiratory Difficulty, by John A. Stiles, Palo Alto (CR) 166
Psychogenic Rheumatism: The Musculoskeletal Expression of Psychoneurosis, by Edward W. Boland, Los Angeles (Or.) 273
Psychosomatic Considerations in Gastroenterology, by Lester M. Morrison, Los Angeles (Or.) 261
Pyloric Stenosis Not a Disease of "First Born," by G. D. Delprat and Otto H. Pflueger, San Francisco (Or.) 76
Psychoneurosis Based on Organic Ailment Cured by Electric Shock Therapy, by D. R. Sears, San Mateo (Or.) 81
Pulmonary Artery Hypertension Associated with Pulmonary Emphysema (CPC) 176
Pulmonary Diseases, Recent Developments in Treatment of, William M. M. Kirby, San Francisco (Or.) 414

R

Radiation Therapy in the Management of Breast Cancer, The Place of, by Lowell S. Goin, Los Angeles (Or.) 11
Radicular Pain in the Upper Extremity, by John B. Doyle, Los Angeles (Or.) 255
Radiology, What's New in, Wilbur Bailey, Los Angeles (Or.) 429
Recovery from a Subacute Overdose of Morphine by Prompt Incision and Drainage (LE) 401
Reinfection in Syphilis, by Norman N. Epstein, San Francisco (Or.) 374
Relationship of the Health Officer and the Practicing Physician to the Planning of Smaller Hospital and Health Center Facilities in California, by P. K. Gilman, San Francisco (Or.) 135
Relation of the Private Physician to the Cancer Control Program, by Lyell C. Kinney, San Diego (Or.) 288
Required Reading (Ed.) 174
Responsibility of Medicine, The, by John W. Cline, San Francisco (Or.) 331
Review of Common Ocular Problems in Children, by Martin P. Koke, San Diego (Or.) 370
Roentgen Cardiac Kymography: Electrocardiographic Correlation, by S. F. Thomas, Palo Alto and L. H. Garland, San Francisco (Or.) 126
Rural Medical Care and Hospitalization, by Carroll B. Andrews, Sonoma (Or.) 16

S

Scrotectomy for Scrotal Elephantiasis, by Perry A. Bonar, San Rafael, (Or.) 166
Section on General Practice—Problems, Goals, Responsibilities, by E. A. Royston, Los Angeles (Or.) 280
Splenectomy in a Case of Disseminating Lupus Erythematosus with Thrombocytopenic Purpura, J. H. Brady and W. S. Neal, Visalia (CR) 448
Standards for Safe Use of Curare (LE) 401
Streptomycin Treatment of Tuberculous Tracheo-Bronchitis, by Emile Bogen, San Fernando, and Lyman A. Brewer, III, Los Angeles (CR) 295
Surgical Treatment of Cancer, The, Richard B. Cattell, Boston (Or.) 416
Surgical Treatment of the Horseshoe Kidney, Franklin Farman, Whittier (Or.) 286
Surgical Treatment of Mixed Tumors of the Parotid Gland, by Edwin G. Clausen and R. Bruce Henley, Oakland (Or.) 366
Syphilis in Pregnancy, Charles W. Barnett and John M. Read, San Francisco (Or.) 432

T

That Dodo Again (Ed.) 44
Therapy of Proved Efficacy in Otomycosis, by Ben L. Bryant, Los Angeles (Or.) 359
Torsion of the Testicle, Lloyd Kindall and Thomas T. Nickels, Oakland (Or.) 446
Treatment of Urinary Tract Infections, Sidney Olsen, San Francisco (Or.) 440
Treatment of Epilepsy with Methylphenylethyl Hydantoin (Mesantoin), by Robert B. Aird, San Francisco (Or.) 141
Treatment of Hypertension (CS) 299
Tularean Looks at Tularemia, A, by Ray W. Rosson, Tulare (Or.) 137

U

Ureteral Reflux, by James Steinberg, Los Angeles (Or.) 27

V

Valve Deformity During Healing of Subacute Bacterial Endocarditis, James A. Barr and Charles P. Baker, Oakland (CR) 449
Vascular Surgery (Ed.) 43

W

Warts, by H. J. Templeton, Oakland (Or.) 23
What Are the Basic Needs for Public Health in California? by Dwight M. Bissell, San Jose (Or.) 270

CLINICAL CONFERENCE

Carcinoma of the Thyroid Gland (CS) 454
Early Spondylarthritis of the Ankylosing Type (CC) 106
Pulmonary Artery Hypertension Associated with Pulmonary Emphysema (CPC) 176
Treatment of Hypertension (CS) 299

CALIFORNIA MEDICAL ASSOCIATION

California Physicians' Service—Fish or Cut Bait 180
C.M.A. Annual Meeting Program and Reports 189
C.M.A. House of Delegates Proceedings 473
C.M.A. Position on Rebating 108
C.M.A. Statement on Hospitalization 46
Council Meeting Minutes 108, 314
Council Meeting Minutes 467
Council Meeting Minutes 108
Executive Committee Meeting Minutes 47, 179
Prepaid Medical Care Plans Likely to Increase in Importance When "Recession" Comes 45
Rebates, Council Action on 312

INFORMATION

A.T.S. States Policy on BCG Vaccine ... 517
Board of Medical Examiners ... 403
Cancer Society Campaign ... 323
Hospitalization and Treatment of Pay Patients in County Hospitals ... 53
Irwin Memorial Blood Bank ... 518
Medical Supplies Needed in Devastated Areas ... 403
Night Service, County Medical Societies Called Upon to Meet Public Demand ... 323
Reporting of Deafness in Children Required ... 403
Tissue Diagnosis Division in California Department ... 185
United Public Health League ... 52

BOOK REVIEWS

Advances in Military Medicine, Volume I and II ... 520
American Illustrated Medical Dictionary, The ... 56
Amiable Autocrat ... 187
Atlas of Bacteriology ... 327
Benjamin Silliman—Pathfinder in American Science ... 119
Biochemistry for Medical Students ... 328
Blood Derivatives and Substitutes ... 325
Blood Pressure and Its Disorders, Including Angina Pectoris ... 520
Brief Psychotherapy ... 329
Calcific Disease of the Aortic Valve ... 327
Communal Sick Care in the German Ghetto ... 56
Communicable Diseases, Handbook of ... 404
Deep Analysis ... 404
Dermatology in General Practice ... 326
Developmental Diagnosis, Normal and Abnormal Child Development ... 55
Diseases Transmitted from Animals to Man ... 55
Doctor in Oregon, The ... 519
Ear, Nose and Throat Symptoms, Diagnosis and Treatment ... 325
Experimental Airborne Infection ... 405
Fatigue and Impairment in Man ... 405
General Medicine, 1947 Year Book of ... 186
General Therapeutics, 1947 Year Book of ... 186
Gifford's Textbook of Ophthalmology ... 326
Handbook of Communicable Diseases ... 404
Handbook of Diagnosis and Treatment of Venereal Disease ... 330
History of Medicine ... 119
History of the Alameda County Medical Association, A ... 186
Hodgkin's Disease ... 119
Human Race, The ... 186
Illustrations of Regional Anatomy ... 329
Introduction of Biochemistry, An ... 329
Introduction to Gastro-Enterology, An ... 404
Laboratory Manual of Microbiology for Nurses ... 186
Louse, The ... 119
Manual of Clinical Therapeutics ... 519
Manual of Otology, Rhinology and Laryngology, A ... 520
Medicine ... 405
Methods of Diagnosis ... 328
Pharmacology and Experimental Therapeutics ... 325
Pharmacology Therapeutics and Prescription Writing ... 187
Physical Medicine in General Practice ... 328
Plague ... 120
Practical Child Guidance and Mental Hygiene ... 520
Practical Office Gynecology ... 519
Principles and Practice of Medicine, The ... 186
Psychopathology and Education of the Brain-Injured Child ... 325
Pye's Surgical Handicraft ... 56
Radium Dosage ... 328
Recent Advances in Endocrinology ... 187
Review of Diseases of the Nose, Throat and Ear, A ... 329
Sexual Behavior in the Human Male ... 330
Symptoms and Signs in Clinical Medicine ... 327
Synopsis of Neuropsychiatry ... 328
Synopsis of Obstetrics ... 55
Thematic Appreception Test, The ... 329
Unipolar Lead Electrocardiography ... 404
Venereal Disease, Handbook of Diagnosis and Treatment of ... 330
Years After Fifty, The ... 519
Year Book of General Medicine, 1947 ... 186
Year Book of General Therapeutics, 1947 ... 186
140 Million Patients ... 120
400 Years of a Doctor's Life ... 326

MEDICAL JURISPRUDENCE

California Status Pertaining to Issuance of Reciprocity License to Practice Medicine ... 406
Hospitals: Liability—Degree of Care ... 56
Physicians—Malpractice—Standard of Care and Skill ... 188

DEATH NOTICES

Arnout, John Clark ... 514
Ashkin, Hyman ... 47
Athon, Lewis Harlan ... 398
Bayley, Walter A ... 181
Bonn, Harry Kraylor ... 320
Burke, Edward Wilbur ... 398
Butterfield, Edwin Rutherford ... 114
Carpenter, Harry L ... 47
Cody, Bernard Anthony ... 398
Coggin, Charles Benjamin ... 181
Cooper, Thomas Egner ... 114
Crisp, Nazareth John ... 47
Dyke, Louis Henry ... 320
Edgar, James Day ... 398
Finsand, Victor ... 47
Falk, Charles Clifford, Sr. ... 47
George, James DeWitt ... 398
Graves, John Henry ... 181
Grundy, Gordon Milton ... 114
Hamilton, James Kiah ... 320
Hanford, Frank Wood ... 320
Harral, Pinckney ... 320
Hastings, Hill ... 320
Hauser, Rupert Van Alstyne, Jr. ... 47
Henderson, Joseph Jefferson ... 181
Hiller, Albert William ... 48
Johnson, Clark Moore ... 181
King, Jesse Alexander ... 514
Laugeson, Lyder Laurita ... 48
Magan, Percy Tilson ... 114
McLain, Liva Charles ... 514
Miller, Thatcher ... 320
Moffitt, Edwin Jay ... 114
O'Connor, James Hunt ... 320
O'Connor, Thomas Hunt ... 320
Oftedal, Sverre ... 320
Oliver, Alfred Shelton, Jr. ... 48
Overend, Edmund J ... 320
Palmer, Caroline Bell ... 114
Patterson, Lloyd Hoyt ... 514
Probert, William Henry ... 182
Reynolds, Nathan Oyler ... 48
Rooney, Charles Edward ... 48
Rowell, Hubert Nathan ... 514
Sample, Thomas Nelson ... 114
Sansum, William David ... 182
Sawyer, Frank Everett ... 48
Sheehy, Frank ... 398
Siever, Abraham ... 182
Simpson, Bryant Robert ... 182
St. Sure, Frank Adolph ... 182
Taylor, Ross Oren ... 398
Thompson, Elmer Harmon ... 48
Toland, Clarence Gaines ... 114
Traber, Charles Holmes ... 514
Watkins, Cassius ... 398
Weeks, Alanson ... 48
Wells, George Dillard ... 320
Wilty, Cullen Francis ... 398
Yates, Elizabeth Mildred ... 398
Yost, Francis Oliver ... 320
Zook, Abraham James ... 48

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